

Purchasing Week

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\$6 A YEAR U. S.

\$25

A YEAR FOREIGN



Before You Build Your Bomb Shelter...

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McGraw-Hill Economic Advisor

In keeping with what seems to have become conventional procedure in this field of operations, I have a guest columnist this time. His observations are directed, broadly, to the problem of what to do about atomic bomb shelters—a problem about which everyone seems to be doing some thinking or talking, and sometimes both.

To add a little element of suspense, I'll postpone telling you about my guest until after he makes his observations. Here they go:

"We have all heard of cities in South America built upon the side of fiery mountains, and how, even in this tremendous neighborhood, the inhabitants are not a jot more impressed by the solemnity of mortal conditions than if they were delving gardens in the greenest corner of England. There are serenades and suppers and much gallantry among the myrtles overhead; and meanwhile the foundation shudders underfoot, the bowels of the mountain growl, and at any moment living ruin may leap sky-high into the moonlight, and tumble man and his merry-making in the dust.

A Place for Nobody but Hermits

"In the eyes of very young people, and very dull old ones, there is something indescribably reckless and desperate in such a picture. It seems not incredible that respectable married people, with umbrellas, should find appetite for a bit of supper within quite a long distance of a fiery mountain; ordinary life begins to smell of high-handed debauch when it is carried on so close to a catastrophe; and even cheese and salad, it seems, could hardly be relished in such circumstances without something like a defiance of the Creator. It should be a place for nobody but hermits dwelling in prayer and maceration or mere born-devils drowning care in a perpetual carouse.

"And yet, when one comes to think upon it calmly, the situation of these South American citizens forms only a very pale figure for the state of ordinary mankind. This world itself, travelling blindly and swiftly in overcrowded space, among a million other worlds travelling blindly and swiftly in contrary directions, may very well come by a knock that would set it into explosion like a penny squib.

'A Bagful of Petards'

"And what, pathologically looked at, is the human body with all its organs, but a mere bagful of petards? The least of these is as dangerous to the whole economy as the ship's powder-magazine to the ship; and with every breath we breathe, and every meal we eat, we are putting one or more of them in peril. If we clung as devotedly as some philosophers pretend we do to the abstract ideal of life, or were half as frightened as they make

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Panorama

• **A New P/W Product Guide** has been compiled to help you buy. The subject is office duplicating machines, and it begins on page 44.

• **Conflict of Interest** is a touchy subject. Consultant George A. Renard discusses on page 14 what Purchasing can do to help clear the air.

• **Mixed Strategy Games** are back. See how your strategies would work in the reciprocity and time study problems on pages 16 and 17.

• **Developing Top-Level Buyers** means providing top-level instructors. 'Pro-D Perspective' on page 19 discusses how the NAPA is going about it.

AF Procurement Chief Chews Out Contractors

Los Angeles — A Pentagon procurement chief read a riot act to West Coast contractors last week. He told a meeting of military suppliers, mainly from the electronics and missile industries, that their procurement procedures and practices still are not up to Air Force standards.

Lt. Gen. Mark E. Bradley, Jr., Air Force deputy chief of staff for systems and logistics, made it clear the Pentagon feels the performance of many contractors leaves a lot to be desired.

Speaking at a meeting of the National Industrial Security Assn., Bradley said the Air Force Management Assistance Survey Program, although still in its early stages, has revealed im-

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Steel Voted Outstanding 1962 Worry; Jumpy Prices Rated No. 2 by P.A.'s

Chemicals Pace Downward Trend In Monthly Wholesale Price Index

New York—With chemicals in the vanguard, industrial prices as a whole continue to gravitate downward. The latest PURCHASING WEEK Industrial Wholesale Price Index pinpoints overall levels at 1½% below those of a year ago (see chart page 4), with petroleum, plastics, and nonferrous metals trailing chemicals closely in the downtrend.

With easiness prevalent in such key groups, price experts said indications were that the lower levels would persist into December and perhaps early next year.

The decline in some of the key groups is significant. Gasoline, for example, is 8% below a year ago. Even groups that have shown signs of leveling out, like textiles, are still well below year-ago levels.

The situation in organic chemicals (down almost 4% below 1960) is particularly acute, because recent declines, such as last week's 1¢/lb. cut for maleic anhydride and the ½¢/lb. reduction in fumaric acid, reveal that the downtrend has not yet been arrested.

The reductions in maleic an-

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Market Debut Put Back On Electrostatic Copiers

New York—PA's waiting for a look at the "low-cost" electrostatic copying machines once promised for late 1961 will have to wait another four or five months. And prices that once started as low as \$500 will probably be in the \$800-to-\$900 bracket.

A PURCHASING WEEK check of companies with electrostatic plans found that Bohn Business Machines, Savin Business Machines, and Smith-Corona Marchant are rushing to get into production and join American Photocopy Company which made initial delivery of its higher-priced unit last month. The APECO "Electrostat" sells for \$1,195 and is available on lease. The only other electrostatic

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BY THE NUMBERS: New experimental machine unveiled by IBM does arithmetic on voice command. Device is called 'Shoebbox.'

Recruiting Also Among Many Tough Problems P.A.'s See Coming Up

(A Special P/W Survey)

New York—"If you don't buy smarter in 1962 than you did in 1961, you're in trouble."

That's the way one purchasing vice president sized up next year when asked to assess his staff's chief buying hurdles over the next 12 months.

Purchasing men from coast to coast—replying to similar questions asked by PURCHASING WEEK in a dozen major cities—agree that their purchasing roadmaps for 1962 cover some bumpy ground. In general, routes will be determined on an industry-by-industry basis, but key decisions must be made in these areas:

• **Steel**—how to buy wisely in a contract negotiation year.

• **Prices**—keeping attuned to price changes, both up and down.

• **International tensions**—gearing to meet economic and political changes that affect foreign suppliers' deliveries and pricing.

• **General business outlook**—riding herd on inventories and suppliers to keep material levels in gear with changing forecasts.

• **Personnel**—training more purchasing managers as buying, particularly in the aerospace industries, becomes more technical.

Steel is proving to be a particularly tough buying decision for many purchasing men. P.A.'s in St. Louis, Atlanta, Chicago, Dallas, and elsewhere labeled it their "prime worry," and some said flatly they had plans to hedge buy against the possibility of a strike next summer. Others, like Leon Menzl, procurement director at American Machine & Foundry, said "We're not increasing our inventory now... but this may change."

The problem of stocking steel

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Defense Dept. Grant Puts Purchasing Braintrusts In Business for Pentagon

Washington — The Pentagon has given its new procurement "think factory," the Logistics Management Institute, \$600,000 to figure out ways to revamp inventory planning and eliminate uneconomic buying, simplify contract specifications, improve contractor performance, and broaden military contract awards.

About to set up shop on a full-time basis under a Defense Dept. contract awarded last week, the nonprofit institute now is recruiting a staff of purchasing professionals. It plans to open headquarters in about one month at 4900 Massachusetts Ave., N.W., Washington, D. C., with a staff

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Rubber Prices Declining

London—The growing competitive battle between synthetic and natural rubber, plus the decision of the United States and England to step up stockpile sales, is weakening rubber prices.

• **Tree rubber**—Tags have declined 2½¢/lb. in the past month and a half, putting the current price at 27½¢/lb. or 5¢/lb. below the highs of late April.

• **Synthetic rubber**—Shell

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Purchasing Week's

Purchasing Perspective

A man who may qualify as one of the most descriptive, as well as astute, of the current batch of business executives issuing economic prognostications for 1962 is Continental Can's marketing vice president, Raymond G. Fisher. Sweeping aside the current repetitiously quoted batch of statistics in favor of a somewhat less formal assessment, Fisher sizes up the outlook this way: "If you give the average American consumer a buck, it will burn a hole in his pocket."

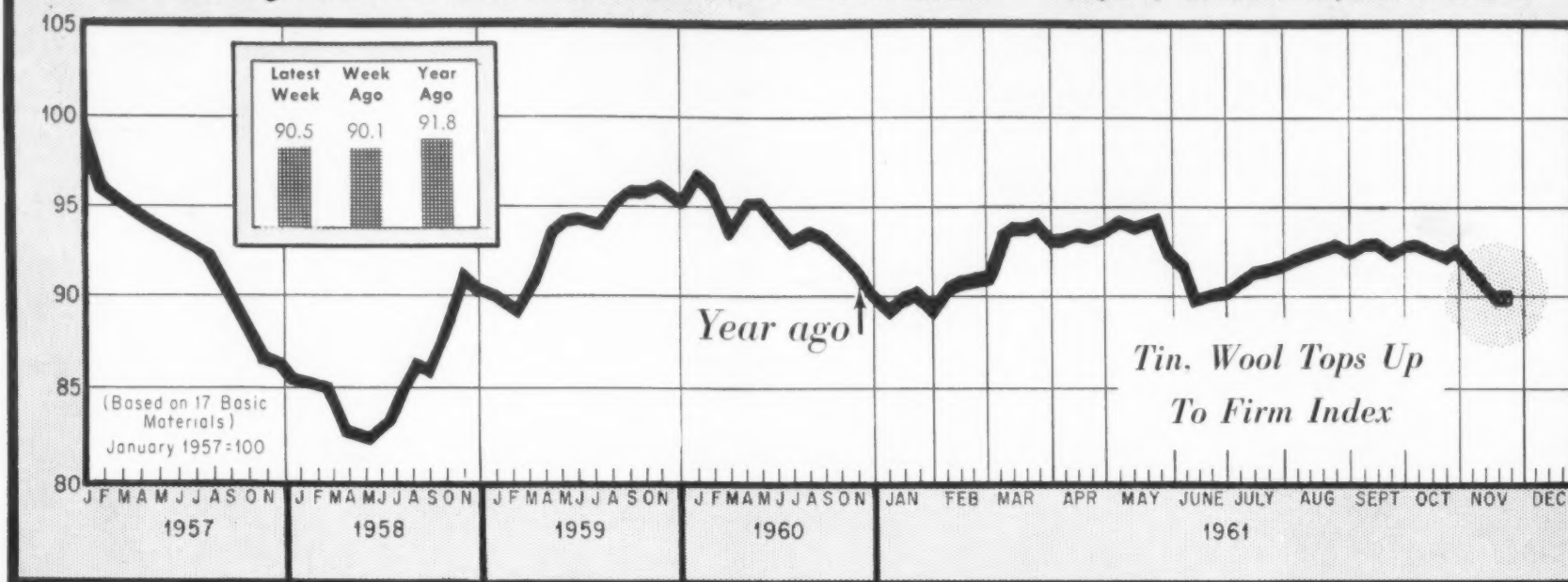
What Fisher is saying is that the pivotal consumer is the man to watch in the coming months, and chances are he'll come through with a substantial, although perhaps not the looked-for boom-type, spending surge in 1962. The consumer accounts for about two-thirds of all the spending in the U.S. economy, and his degree of caution may well set the pace for the other variables.

Business spending so far has been notably cautious, particularly in inventories where executives are insisting temperance

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Purchasing Week Industrial Materials Price Barometer

This index, based on 17 basic materials, was especially designed by the McGraw-Hill Department of Economics.



This Week's Commodity Prices

METALS

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Pig iron, Bessemer Pitts., gross ton	67.00	67.00	67.00	0
Pig iron, basic, valley, gross ton	66.00	66.00	66.00	0
Steel, billets, Pitts., net ton	80.00	80.00	80.00	0
Steel, structural shapes, Pitts., cwt.	5.50	5.50	5.50	0
Steel, structural shapes, Los Angeles, cwt.	6.20	6.20	6.20	0
Steel, bars, del., Phila., cwt.	5.98	5.98	5.97	+ .2
Steel, bars, Pitts., cwt.	5.675	5.675	5.675	0
Steel, plates, Chicago, cwt.	5.30	5.30	5.30	0
Aluminum, pig, lb.	.24	.24	.26	- 7.7
Secondary aluminum, #380 lb.	.212	.212	.23	- 7.8
Copper, electrolytic, wire bars, refinery, lb.	.306	.306	.296	+ 3.4
Brass, yellow, (sheet) lb.	.493	.493	.493	0
Lead, common, N.Y., lb.	.10	.10	.12	-16.7
Nickel, electrolytic, producers, lb.	.813	.813	.74	+ 9.9
Tin, Straits, N.Y., lb.	1.235	1.231	1.028	+20.1
Zinc, Prime West, East St. Louis, lb.	.115	.115	.13	-11.5

FUELS

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Fuel oil #6 or Bunker C, Gulf, bbl.	2.20	2.20	2.30	- 4.3
Fuel oil #6 or Bunker C, N.Y., barge, bbl.	2.62	2.62	2.62	0
Heavy fuel, PS 400, Los Angeles, rack, bbl.	2.10	2.10	2.05	+ 2.4
Lp-Gas, Propane, Okla., tank cars, gal. (incl. discount)	.035	.035	.045	-22.2
Gasoline, 92 oct. reg., Chicago, tank car, gal.	.105	.11	.126	-16.7
Gasoline, 84 oct. reg., Los Angeles, rack, gal.	.108	.108	.105	+ 2.9
Kerosene, Gulf, Cargoes, gal.	.098	.098	.09	+ 8.9
Heating oil #2, Chicago, bulk, gal.	.093	.093	.095	- 2.1

CHEMICALS

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Ammonia, anhydros, refrigeration, tanks, ton	94.50	94.50	94.50	0
Benzene, petroleum, tanks, Houston, gal.	.31	.31	.34	- 8.8
Caustic soda, 76% solid, drums, carlots, cwt.	4.80	4.80	4.80	0
Coconut oil, inedible, crude, tanks, N.Y. lb.	.121	.123	.143	-15.4
Glycerine, synthetic, tanks, lb.	.248	.248	.293	-15.4
Linseed oil, raw, in drums, carlots, lb.	.188	.188	.159	+18.2
Phthalic anhydride, tanks, lb.	.15	.15	.185	-18.9
Polyethylene resin, high pressure molding, carlots, lb.	.275	.275	.275	0
Polystyrene, crystal, carlots, lb.	.18	.18	.19	- 5.3
Rosin, W.G. grade, carlots, fob N.Y. cwt.	13.15	13.15	18.10	-27.3
Shellac, T.N., N.Y. lb.	.31	.31	.31	0
Soda ash, 58% light, carlots, cwt.	1.55	1.55	1.55	0
Sulfur, crude, bulk, long ton	23.50	23.50	23.50	0
Sulfuric acid, 66% commercial, tanks, ton	22.35	22.35	22.35	0
Tallow, inedible, fancy, tank cars, N.Y. lb.	.055	.055	.061	- 9.8
Titanium dioxide, anatase, reg. carlots, lb.	.255	.255	.255	0

PAPER

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Book paper, A grade, Eng finish, Untrimmed, carlots, cwt.	17.75	17.75	17.75	0
Bond paper, #1 sulfite, water marked, 20-lb, 16-carton lots, cwt.	25.20	25.20	25.20	0
Chipboard, del. N.Y., carlots, ton	100.00	100.00	100.00	0
Wrapping paper, std. Kraft, basis wt. 50 lb rolls	9.50	9.50	9.50	0
Gummed sealing tape, #2, 60 lb basis, 600 ft. bundle	6.30	6.30	6.30	0

BUILDING MATERIALS

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Cement, Portland, bulk carlots, fob New Orleans, bbl.	3.65	3.65	3.65	0
Cement, Portland, bulk carlots, fob N.Y., bbl.	4.20	4.20	4.20	0
Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm	107.00	107.00	118.00	- 9.3
Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm	123.00	123.00	132.00	- 6.8
Spruce, 2x4, s4s, carlots, fob Toronto, mftbm	83.00	83.00	82.00	+ 1.2
Fir plywood, 1/4" AD, 4x8, dealer, crid, fob mill, msf.	60.00	60.00	68.00	-11.8

TEXTILES

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Burlap, 10 oz. 40", N.Y., yd.	.138	.139	.139	- .7
Cotton middling, 1", N.Y., lb.	.356	.357	.323	+10.2
Printcloth, 39", 80x80, N.Y., spot, yd.	.178	.178	.180	- 1.1
Rayon twill, 40 1/2", 92x62, N.Y., yd.	.21	.21	.22	- 4.5
Cotton drill, 1.85, 59", 68x40, N.Y., yd.	.375	.375	.36	+ 4.2
Wool tops, N.Y., lb.	1.625	1.620	1.495	+ 8.7

HIDES AND RUBBER

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Hides, cow, light native, packers, Chicago, lb.	.215	.215	.165	+30.3
Rubber, #1 std ribbed smoked sheets, N.Y., lb.	.275	.274	.294	- 6.5

(Price sources include: Coal Age, E&MJ Metal and Mineral Markets, Engineering News-Record, Platts Oilgram Price Service.)

Purchasing Week's

Price Perspective

PRICE PREDICTIONS—The nation's leading business and economic analysts are taking an optimistic tone in their first pass at forecasting 1962 price trends. Few see any sharp inflationary push in the year ahead.

Consensus is reflected in a recent F. W. Dodge survey of 316 leading economists. These experts see the Bureau of Labor Statistic's Wholesale Price Index rising to only 120.8 (1947-49=100) by December, 1962. That's less than 2% above the latest reading.

Moreover, this figure includes agricultural prices, which should show considerable buoyancy in coming months because of higher government supports. Subtract this element, and it's doubtful whether these analysts expect much more than a 1%-1 1/2% rise in industrial prices.

Latest price figures lend encouragement to these forecasts. Industrial prices are 1 1/2% below a year ago. And sensitive commodity prices (the kind that generally rise at first sign of a demand pickup) are again down close to their recession lows.

FURTHER CONFIRMATION of the basic noninflationary outlook comes from the nation's money managers.

The Federal Reserve Bank of Chicago, in its November issue of "Business Conditions," notes: "American business firms may be able to supply the demands of a prosperous economy in 1962 without the undesirable accompaniment of a build-up of inflationary pressures."

The reasons, according to the Bank, are four in number: (1) the end of the huge postwar surge of demand; (2) the discouraging of excessive wage demands because of high unemployment; (3) increased supplier competition stemming from heavy unused capacity in most basic industries; and (4) advancing technology which permits substantial increases in productivity.

These factors, says the Bank, are making for a basic shift in the underlying supply-demand pattern—one which could mean a period of sustained price stability rather than the usual postwar inflationary fare.

If true, it won't be the first time in our history that production increases have been achieved without inflation. During the 1920's, for example, output rose by nearly 50%—while prices (after declining sharply in 1920-21) remained relatively stable.

THE BUYING FACTOR—The "no inflation" thesis also is supported by current buying plans of both consumers and industry.

A new Federal Reserve Board survey of consumer buying intentions, for example, is relatively neutral as far as outlook is concerned (see Washington Perspective p. 4). While it does show gains over the past three months in the percentage of people planning on buying a new automobile (8.1% compared to 7.6%), there's relatively little change from the figures of a year ago.

Even claims of a 7-million car year must be seen in their proper light. Changes in the product mix—with the accent on more compacts—probably will leave demand for over-all materials only slightly above this year's levels.

Another sobering thought: While retailers are relatively happy about their sales prospects over the next few months, estimates of increases usually fall in the 2% to 5% range—hardly enough to put a strain on the supply and price of any major material.

Much the same picture is revealed in new plant and equipment projections. The 4% gain predicted for 1962 hardly presages any super-boom with its greatly expanded needs for metals and other key raw materials.

Even if this estimate is on the low side (as many optimistic economists are saying), it's hardly likely that any tremendous jump will be racked up, especially with industry operating at about only 81% of capacity.

Two Firms Hike 1/4-In. Plywood Price; Third Company Institutes Reduction

New York—The 1/4-in. AD sanded fir plywood grade is losing its position as a pricing standard for other plywood grades. Last week major plywood producers changed quotes on a number of sanded fir AD items with marked variations from the traditional industry practice of keeping all these tags in set relation to the quote for the 1/4-in. bellwether grade.

Georgia-Pacific boosted its list price for the 1/4-in. AD by \$3/1000 sq. ft.—up to \$67. The company also "raised other thicknesses of both interior and exterior grades by varying amounts, generally less than the traditional ratio to the 1/4-in. grade."

U.S. Plywood raised its 1/4-in. price \$3 to \$63/1000 sq. ft. but did not change tags for other specifications. And Weyerhaeuser dropped its price \$2 to \$62/1000 sq. ft. for the 1/4-in. grade and moved its other quotes to keep traditional price relationships intact.

While specific figures were unavailable, the Georgia-Pacific move changed the tag relation primarily between the firm's 1/4-in. plywood and its 1/2-in. products.

"Cost relationships have changed among sanded fir ply-

wood items," the company said, "and the different specifications now can seek their own market levels in closer relationship to production costs and demand."

Several industry experts felt that the individual pricing patterns occurred because some companies were trying to alleviate cost pressures by increasing the 1/4-in. sanded grade price, while keeping other specifications more in line with market considerations.

This Week's Scrap Prices

	Nov. 22	Nov. 15	Year Ago	% Yrly Change
Steel, #1 hv, dlvd Pitt, ton.....	34.00	34.00	27.00	+25.9
Steel, #1 hv, dlvd Clev, ton.....	31.00	32.00	25.00	+24.0
Steel, #1 hv, dlvd Chic, ton.....	29.00	29.00	25.00	+16.0
Copper, #1 wire, dlr buy, feb NY, lb.....	.23	.235	.220	+4.5
Copper (hv) & wire mix, dlr buy, feb NY, lb.....	.21	.215	.200	+5.0
Brass, light, dlr buy, feb NY, lb.....	.115	.12	.10	+15.0
Brass, hv yellow mix, dlr buy, feb NY, lb.....	.145	.145	.118	+22.9
Alum (cast), mixed, dlr buy, feb NY, lb.....	.09	.09	.09	0
Alum (sheet), old clean, dlr buy, feb NY, lb.....	.09	.09	.085	+5.9
Zinc, old, dlr buy, feb NY, lb.....	.03	.03	.035	-14.3
Lead, soft or hard, dlr buy, feb NY, lb.....	.07	.07	.078	-.7
Rubber, mix auto tires, dlvd Akron, ton.....	11.00	11.00	11.00	0
Rubber, synth butyl tubes, East, dlvd, lb.....	.073	.073	.065	+12.3
Paper, old corrug box, dlr, Chic, ton.....	18.00	18.00	18.00	0
Paper, #1 mixed, dlr, NY, ton.....	3.00	3.00	1.00	+200.0
Polyethylene, clear, dlr, NY, lb.....	.04	.04	.10	-60.0

Verson Extends Leases

Chicago — Verson Allsteel Press Co. is now offering seven-year leases on its line of press brakes, hydraulic presses, and shears. Previously, the maximum lease time was five years.

The lease plan, underwritten by Nationwide Leasing Co., is available for all Verson equipment worth \$10,000 or more. Any firm with good credit standing is eligible.

Verson officials said the new plan offers smaller companies the opportunity to modernize and expand which they did not have in the five-year maximum payment period.

So...you think it's paid for

O-B
distribution
materials in
local Graybar
stocks can save
you 10% to 25%
"cost of
possession"

Price Briefs

Aluminum alkyls — Texas Alkyls is posting substantial reductions, with new quotes down to the \$0.90-\$1.50 range compared to the previous \$2.00-\$5.00 range. Competition is behind the reductions.

Synthetic fabrics — Tags on a wide range of fabrics are going up in response to better demand for synthetic gray cloths. Spun yarn fabrics are reported some 10% above summer lows.

Steel — Charles L. Huston, Jr., president of Lukens Steel sees no chance of any near-term price hike. He thinks demand isn't nearly strong enough to offset the combined competitive effects of imports and substitutable materials such as aluminum.

Quebracho — This key tanning material is expected to go over 7¢/lb. before the year is out because of strong demand and higher freight rates. Two 1961 increases already have been effected—bringing the current price to 6 3/4¢/lb.

Citric acid, salts, and esters — Competition caused Chas. Pfizer & Co. to cut tags for citric acid, salts, and esters in varying amounts up to 10%. The new carlot price for granular citric acid is 27¢/lb. in 100 lb. bags.

Inflation — Sen. A. Willis Robertson (D-Va.), chairman of the Senate Banking and Currency subcommittee, told a meeting of New York bankers that only "constant vigilance" and "continued restraint" can contain the forces of inflation. Unless "we proceed with caution," he said, prices may head upward again. As for the government, Robertson said most of its "tendency toward inflation can be contained or reversed."

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Purchasing Week's Washington Perspective

The consumer is still a major question mark in the business recovery, Washington feels.

The latest survey of consumer buying intentions by the Federal Reserve Board shows (1) the number of families planning to buy homes in the next 12 months remains at about the same level as a year ago, (2) consumers plan to buy autos at about the same rate as last year and (3) plans to buy major household appliances still are below year-ago levels.

All this portends that consumer spending isn't about to fire an economic boom—or put much leverage under prices.

Cross currents: Industrial production rose another point in October and now is a full seven percentage points above the level of October, 1960. New housing starts in October totaled 127,600 units, down slightly from September but still substantially above the 113,200 new starts in October of 1960.

Details of the Administration's bold new foreign trade policy (PW Nov. 13, p. 6) are being filled in—and bold it is. President Kennedy's aides have just about convinced him to seek authority from Congress next year to bargain U.S. and European Common Market tariffs down to zero on exports of common items. That would include nearly all manufactured goods.

The timetable: By 1969 tariffs between members of the Common Market are supposed to be eliminated entirely. Under the current Administration plan (subject to change, of course) U.S. and European tariffs on most industrial goods also would cease to exist—opening the way to a free flow of goods between the two major industrial producers.

Kennedy also will seek authority to cut U.S. tariffs on other types of goods by as much as 50% and to enter into special commodity agreements controlling supplies in order to stabilize markets for oil, some nonferrous metals, coffee, and other sensitive products.

The President wants complete discretion as to what types of products to include in bargaining. Thus, he could exclude certain categories temporarily to give affected industries more time to adjust to free competition.

All this is asking a lot. Obviously, Kennedy will not get all he wants. But Congressional leaders feel he will get enough to make the new approach to foreign trade effective.

Changes in the buy-American law also may be in the making. Pressure for such a move is sparked by industries which face increased competition from West Europe and Japan in doing business with the federal government. The pressure already is having its effect in several states which have issued new buy-American regulations banning the purchase of materials for highways and other projects.

The federal government protects domestic bidders by giving them a 6% price advantage over foreign bidders; 12% if the company is located in a depressed area. The aluminum industry wants to raise this to somewhere between 12% and 25%.

Expected any day is a ruling from Comptroller General Joseph Campbell on a key test case. Allis-Chalmers Manufacturing Co. is appealing a \$17.8-million contract award by the Corps of Engineers to Baldwin-Lima-Hamilton Corp. on the ground that 70% of the work on 15 big hydro turbines for the John Day Dam on the Columbia River would be done in Japan. Baldwin says only 42% would be done in Japan and claims it qualifies for the contract under an executive order that sets the cutoff at 49%.

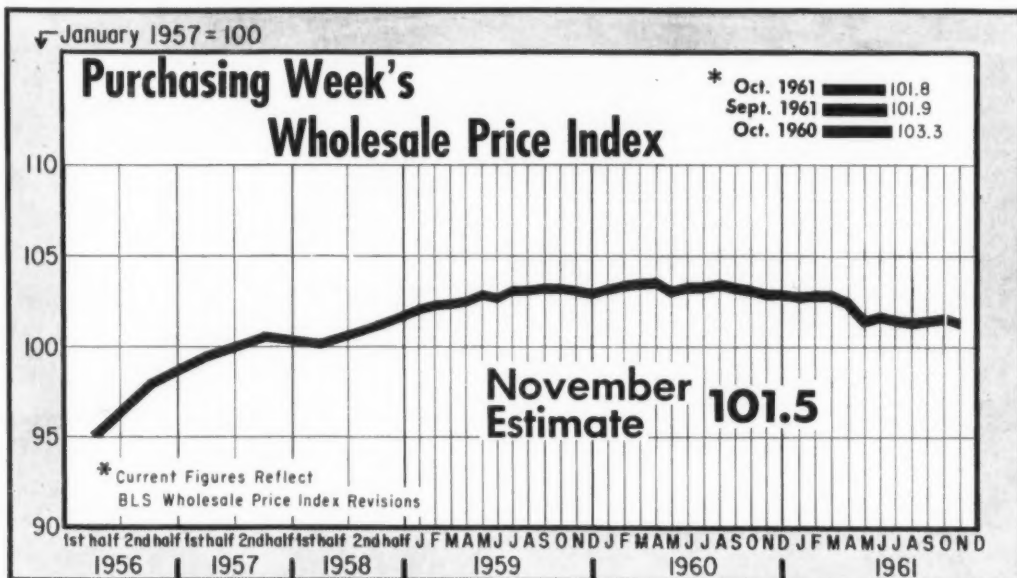
Campbell is expected to go beyond the immediate dispute and comment on the usefulness of the Eisenhower order. His recommendations could spark changes in the buy-American law.

A massive lobbying campaign by truckers for legislation to stem railroad rate-cutting is causing concern among shippers. The measure (S-1197) would change rules of the Interstate Commerce Commission and require it to consider the effect rate cuts by one mode of transportation would have on another. Now, it is forbidden from holding rates of one mode at a particular level to protect the traffic of another.

Consideration of the bill was postponed this year because of opposition from the ICC and the railroads. But truckers are lobbying for grass-roots support among chambers of commerce, and are talking to congressmen back home. The National Industrial Traffic League urges shippers to counter with a grass-roots campaign of their own.

This Month's Industrial Wholesale Price Indexes

Item	Latest Month	Month Ago	Year Ago	% Yrly Change	Item	Latest Month	Month Ago	Year Ago	% Yrly Change
Cotton Broadwoven Goods	98.4	97.8	101.0	- 2.6	Pumps & Compressors	112.8	112.8	112.4	+ .4
Manmade Fiber Textiles	91.5	91.5	95.6	- 4.3	Industrial Furnaces & Ovens	121.1	121.1	122.2	- .1
Leather	123.9	122.0	111.2	+11.4	Industrial Material Handling Equipment	109.0	108.7	107.5	+ 1.4
Gasoline	91.6	94.2	99.7	- 8.1	Industrial Scales	117.1	117.1	115.7	+ 1.2
Residual Fuel Oils	80.1	80.1	82.6	- 3.0	Fans & Blowers	104.7	104.7	105.1	- .4
Raw Stock					Office & Store Machines & Equipment	105.9	106.0	105.2	+ .7
Lubricating Oils	112.6	112.6	111.0	+ 1.4	Internal Combustion Engines	105.1	105.1	104.2	+ .9
Inorganic Chemicals	103.8	103.8	103.7	+ .1	Integrating & Measuring Instruments	122.5	122.5	121.3	+ 1.0
Organic Chemicals	93.8	94.1	98.0	- 4.3	Motors & Generators	93.4	93.4	100.6	- 7.2
Prepared Paint	106.5	106.7	103.5	+ 2.9	Transformer & Power Regulators	89.8	89.2	96.6	- 7.0
Tires & Tubes	92.9	92.9	95.0	- 2.2	Switch Gear & Switchboard Equipment	107.2	106.1	104.1	+ 3.0
Rubber Bolts & Belting	108.1	108.1	108.7	- .6	Arc Welding Equipment	104.4	104.4	109.1	- 4.3
Lumber Millwork	102.9	102.9	105.1	- 2.1	Incandescent Lamps	131.6	131.6	130.9	+ .5
Paperboard	89.9	89.9	99.8	- 9.9	Motor Trucks	105.9	105.3	105.5	+ .4
Paper Boxes & Shipping Containers	101.4	101.4	105.2	- 3.6	Commercial Furniture	106.7	106.7	106.9	- .2
Paper Office Supplies	103.5	103.5	103.2	+ .3	Glass Containers	102.8	102.8	101.3	+ 1.5
Finished Steel Products	108.4	108.4	108.8	- .4	Flat Glass	96.0	96.0	97.6	- 1.6
Foundry & Forge Shop Products	108.4	108.4	108.3	+ .1	Concrete Products	104.7	104.6	104.3	+ .4
Nonferrous Mill Shapes	95.7	96.5	97.8	- 2.1	Structural Clay Products	107.5	107.5	107.7	- .2
Wire & Cable	88.1	88.2	89.0	- 1.0	Gypsum Products	108.0	108.0	104.7	+ 3.2
Metal Containers	106.2	106.2	104.1	+ 2.0	Abrasive Grinding Wheels	94.4	94.4	94.8	- .4
Hand Tools	114.2	114.2	112.5	+ 1.5	Industrial Valves	112.0	113.8	115.0	- 2.6
Boilers, Tanks & Sheet Metal Products	101.5	101.8	101.6	- .1	Industrial Fittings	88.7	88.7	90.4	- 1.9
Bolts, Nuts, etc.	118.4	117.8	106.3	+11.4	Antifriction Bearings & Components	89.2	90.0	90.8	- 1.8
Power Driven Hand Tools	113.3	113.0	108.6	+ 4.3					
Small Cutting Tools	115.9	114.8	118.5	- 2.2					
Precision Measuring Tools	115.1	115.1	109.5	+ 5.1					



Chemicals Pace Downtrend in Wholesale Prices

(Continued from page 1)
hydride and fumaric acid also put pressure on polyester resin tags. Texas Butadiene already has cut prices on its low molecular weight styrene-maleic anhydride copolymer.

An industry spokesman said lower chemical prices as a whole were caused by "a combination of excess capacity, price shading, and easing cost pressure caused by higher volume production."

Price cuts in one chemical area frequently precipitate reductions in others. For example, the recent October cut of 2½¢/lb. in phthalic anhydride brought on ¾¢ to 1½¢ reductions in phthalate plasticizers and glycolate. Later, tags for alkyd resins—another end use for phthalic anhydride—dropped ½¢/lb.

An early third quarter cut—3¢/lb. for azelaic acid—had delayed price repercussions recently when dioctyl azelate was cut 2¢/lb. by Eastman, and Emery Industries followed with 1¢ and 2¢/lb. reductions in three other azelate plasticizers.

A ¼¢/lb. cut in another important organic group—gum turpentine—was registered last week. The new price of 20¼¢/gal. in the South should be close to the bottom for gum turps, with the heavy production season coming to a close.

These price cuts continue a trend that acquired momentum in the third quarter with the reduction in phthalic anhydride and lower tags for acrylonitrile, adipic acid, aniline, phenol and benzene.

A major cause of the weakness in organic tags is the steady pickup in steel production with its concomitant production increase of important coke-oven chemicals such as benzene and naphthalene. This, plus the boost in production of these chemicals from petroleum, weaken the price outlook for naphthalene, benzene, and their derivatives.

For two other widely used chemicals—pentaerythritol and glycerin—foreign competition provides the biggest challenge to current price levels.

Dye Tags Firming

About the only significant price strength in the organics appears among the dyes group where tags are firming because of heavy demand from stepped up textile and paper production.

Among the industrial inorganic chemicals, prices are likely to continue their slight downtrend on the heels of recent cuts in lead oxides and alumina. These are offset somewhat by firmer tin chemical tags and scattered increases such as the 1¢/lb. sodium

sulfate hike scheduled for Dec. 1 by J. T. Baker Chemical Co.

J. T. Baker also brought recent firmness to the acetates, with a 2¢/lb. increase in potassium acetate and 3¢/lb. hikes for barium and ammonium acetate.


CAB Suspends Rate Cuts Planned by Two Airlines On 'Off-Peak' Hour Runs

Washington—The Civil Aeronautics Board has suspended some freight rate reductions proposed by Trans World Airlines and Continental Airlines.

The CAB ruling brings TWA's and Continental's rates into line with those approved for other air freight carriers. The suspended portions are similar to provisions denied to American Airlines and United Air Lines. (see PW, Oct. 30, p. 1)

The CAB denied rate reductions for freight carried in "off-peak" hours and disallowed certain rate reductions for westbound shipments.

The proposals made by TWA, Continental, American, and United had called for rates lower than those offered by Flying Tiger Lines, the first carrier allowed to reduce its rates.

A black and white photograph showing a hand stirring a large barrel of paint. The barrel is filled with a light-colored paint, and the hand is using a stirrer to mix it. The text is overlaid on the barrel.

**It pays to
stir up
new sources
of paint, too!**

(The man from **Barreled Sunlight** has a fresh point of view on paint maintenance.)

It's easy to "get in a rut," when it comes to plant paint purchases. If a certain color or brand looked good once, that's often enough to recommend it a second time around. Even though it may cost more and not look as good as something else! ✧ ✧ A good way to avoid the hazards of "habit buying" is to take a fresh look at your paint maintenance problems through the eyes of a Barreled Sunlight Paint representative. Often he can see ways of improving your color combinations to increase visibility and lower lighting costs. He can take an experienced look at your painting costs, too . . . show you how you may be paying more in application costs than you need to. ✧ ✧ These are a few of many practical paint problems the man from Barreled Sunlight is prepared to discuss with you. Call him in soon for a fresh point of view and a free "On-The-Wall" Demonstration. Write Barreled Sunlight Paint Company, 126K Georgia Avenue, Providence 5, Rhode Island

SEE US AT MAINTENANCE SHOW BOOTH NO. 811

2 FREE GUIDES

The famed Barreled Sunlight "Quick Reference Guide" to more than 50 Engineered Paints, Primers and Undercoats plus a 10-page booklet on "How To Reduce Painting Costs." Write for them.



Barreled Sunlight

Paints

The logo consists of a stylized barrel with the word 'ENGINEERED' written across it in a bold, sans-serif font.

For a Better Looking, Longer Lasting Paint Job at Lower Cost

Seminar Offers Tips on Better Inventory Control

Newark, N. J.—Thirty-six production, inventory, and purchasing managers searching for answers to their inventory problems gathered at Rutgers University for an all-day seminar led by Norman Kobert, vice president of the consulting firm of Bayer, Kobert, and Associates.

Kobert listed nine attack routes to better inventory control. They included:

- **Inventory standardization.** "Engineers are the biggest inventory makers," Kobert said. "They'll always find ways to build up inventory with specifications requirements. The solution is standardization to reduce the number of lots of parts."

- **Reduction of lead time.** "If the purchasing agent can reduce lead time at the vendor, the savings will be felt all the way to the finished product inventory," he said.

- **Better forecasting.** The consultant stated that the sales forecast is in the inventory domain, so those in charge of inventory should require a forecast in units rather than in dollars.

- **Tighter coordination** between purchasing and production scheduling. Scheduling must realize that suppliers are a part of the production system, which means that scheduling cannot perform its function properly without working with purchasing.

- **Better records.** Put simply, records and data processing are no good if they are not used. According to Kobert, inventory control is run by records, so accuracy is crucial.

- **Reduction of holds.** When a customer does not take his order at the agreed time, it's the fault of that customer's purchasing agent, said Kobert. "The P.A. should hang for his mistakes in not accepting items just as the manufacturing man hangs for his mistakes. Charge that purchasing agent for warehousing," he advised.

- **Better theft protection.** Companies tend to watch their cash on hand more carefully than they watch their inventory racks. He said it would be better to put inventory in the bank and leave the petty cash on the loading dock.

- **Salvage programs.** All salvage is a part of inventory cost unless it is removed. The smart purchasing agent will not neglect salvage.

- **Use of premium transportation.** Buying material shipped via air express will cost more at first, but the company will save in the long run with reduced inventory.

The afternoon section of the seminar was a problem course in which the students plotted out samples of ABC inventory and economic order quantity techniques.

Douglas Buys Test Site

Santa Monica, Calif.—Douglas Aircraft Co. has completed the purchase of the 3,900-acre site of its missile and space vehicle test facility near Sacramento, which it previously leased from Aerojet-General Corp. Douglas is modifying equipment at the facility to permit extensive liquid hydrogen flow-testing and static firing of the S-IV stage.

The seminar was part of a two-day get-together sponsored by Rutgers. The first day was devoted to production control. Rutgers said response to the program was so enthusiastic that a repeat performance was scheduled for Dec. 18-19.

In the same week the Purchasing Agents Assn. of Chicago and the Dept. of Business of the Illinois Institute of Technology combined to hold two one-day seminars on efficiency and a common sense approach to inventory control.

Donald Farser, marketing representative of the Chicago office of IBM, conducted a session on techniques of inventory control. The group visited IBM headquarters to see a demonstration of the company's inventory simulator program.

This simulator is a system cranked into a computer which will accommodate all the variables of inventory decisions. Basically, the machine tests an inventory policy before the actual purchase of the material takes place.

Metalwork 'Clearing House' Plan To Be Put Into Effect Nationwide

Hillside, N.J.—Manufacturing & Machining Services Corp. expects to put a "clearing house" plan for metalworking subcontracts in nationwide operation within a year.

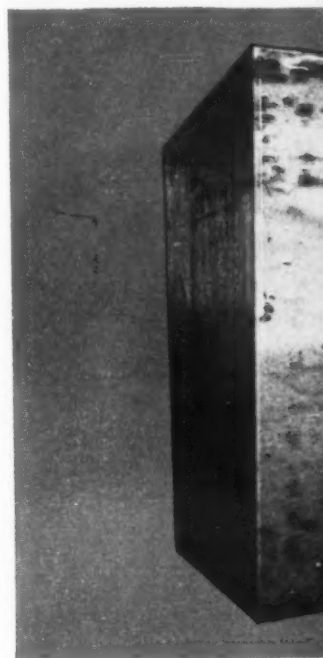
The firm offers contractors a wider choice of subcontracting shops than would normally be available through their own resources. It keeps tabs on its member shops, noting their specialties, capabilities and idle times.

Manufacturing & Machining

has nine agents in the field soliciting subcontracts from industries and government projects throughout the East and Midwest. Every contract is submitted to three member shops.

At present, the firm has signed up 180 member shops, mainly in New England and the Atlantic Seaboard. Member shops pay a \$15 to \$100 weekly fee, depending on their size, plus 3% commission on every contract they receive.

How METALOGICS* takes the P.A. off the high-cost hot seat!



The following case histories are typical of how Ryerson Metallogics helps hundreds of companies save money, improve products, and cut production waste.

Metallogics-trained Ryerson specialists help you value-analyze cost-soaring production problems—and they back up their suggestions with unbiased recommendations on exactly the right steel, aluminum or plastic to do each job best for less.

Little wonder, then, that more and more companies across the country find the high-cost hot seat a little cooler after inviting a Ryerson man to value-analyze specific problems, and come up with recommendations. Give him a call—perhaps he can help answer some of your high-cost questions.

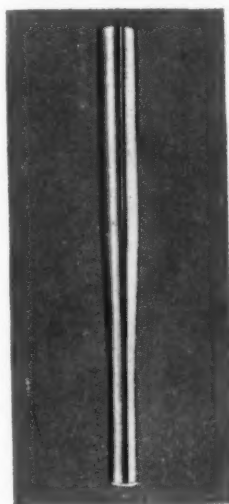
***METALOGICS**—the Ryerson science of giving optimum value for every purchasing dollar.

PRODUCTION COSTS REDUCED 40%

Company was making chrome-plated table legs as a 3-piece weldment and having problems in holding concentricity and making proper preparation for the mirror finish. In addition, production costs were high.

Ryerson recommended this Metallogical

solution: make the legs from one piece of 3" O.D. soft-annealed, cold rolled, electric-welded tubing—half the length tapered to 2" O.D., holding concentricity to 1/32". Results: surface was just right for chrome plating, and production cost reduced.



THREAD GALLING ELIMINATED

Manufacturer made this special coupling of aluminum to gain the advantages of light weight, corrosion resistance and easy machining. But a problem developed due to galling of threads.

Following the recommendation of a Ryerson Metallogics specialist, the company hard-coated the parts by special low-temperature anodizing which produced a surface hardness of Rockwell 70 C. Galling was eliminated, and corrosion resistance increased. One more example of top technical help from Ryerson.





NEW PRODUCT: Valve aimed for U.S. market gets once-over from official at Trade Center.

New Japanese Product Line Aimed for U.S. Market

New York — Japanese manufacturers are readying an intensified sales push for a variety of products hitherto not marketed by Japan in the U. S. The products, including measuring instruments, valves, cutting tools and a tiny calculator, were introduced by a 10-day show at the Japanese Trade Center here alongside some existing product lines.

Quality—not price—will be the major selling point on the new items. Prices for the most part are not substantially less than their U. S. counterparts. Quality,

according to Kiyoshi Nakamura, head of the exhibit, is at least comparable to American-made goods.

Although list tags are substantially cheaper than U. S. prices they come up to a competitive level by the time transportation, distribution, and tariffs are added in.

Goods at the exhibit ranged from bearings that were 10% to 20% cheaper than equivalent U. S. makes to welding electrodes that were "not quite competitive" with American lines. Tags on

smaller size bearings, such as No. 6204, were said to be competitive, with prices on larger sizes running more.

Although prices on electrodes aren't competitive now, Japanese exporters are anxious to have U. S. manufacturers try them out to satisfy themselves of the quality. Takemura-Teisho Co., Ltd., maker of the electrodes, hopes that a new plant scheduled for operation next year will cut costs to competitive levels.

The U. S. user will have to wait a minimum of one month

for his Japanese goods, according to Trade Center officials. It takes a month to ship stock items by steamer; out of stock goods may often take two to three months. Products warehoused here by an American distributor can, of course, be shipped much sooner.

Trade Center exhibitors were fully armed with complete list prices of all goods at the show. All prices are f. o. b. Japan, and do not include shipping, tariffs, and distributor markups (if applicable). Here's a rundown on some typical products:

• **Hand calculating machine.**

Can add, subtract, multiply or divide. Takes up to 10 digit input, gives 20 digit answer. Weighs less than 20 lb. Tiger Calculating Machine Co., Ltd., \$70.

• **Transistorized dynamic strain amplifier.** Portable unit enables direct reading of static strains and simultaneous oscillograph recording of multichannel dynamic strains at up to six or eight points. Self-contained dry cells are good for 20 hr. Kyowa Electronic Instruments Co., Ltd.; \$1,533.

• **Adjustable reamers.** Adjustable cutting tools come in sizes from 11/65-in. to 2 3/4-3 1/2-in. in regular models and up to 2 3/4-in. maximum in pilot style. Reamers come in sets of from 4 to 16 sizes packed in metal case. Hikari Seiko Co., Ltd.; \$15 (set of six pilot reamers, 1 1/2-1 3/4-in.).

• **Floodlight.** Designed for outdoor mounting, heavy-duty floodlight takes 200 or 400 w. bulb and weighs 42 lb. Mitsubishi Electric Mfg. Co., Ltd.; \$90.

• **Valve.** Cast 3-in. ball valve has a Teflon seat. Shinwa Trading Co., Ltd.; \$80 (port of entry, N. Y.).

The remainder of the exhibit concerned itself with existing Japanese lines such as hand tools, auto accessories, radios, electronic components, and drawing instruments.

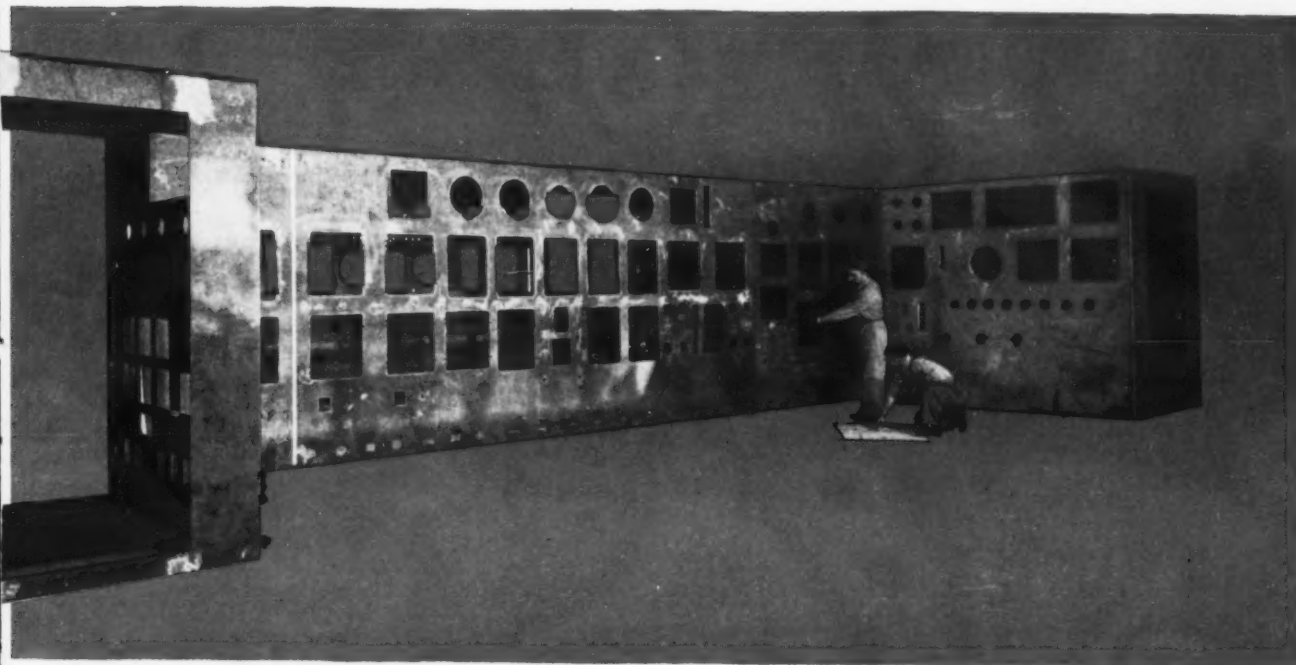
The new products exhibit was essentially the same as the one held in San Francisco last month. A third edition is targeted for Toronto in January.

Distributors haven't been chosen yet for the new lines, but the Japanese Trade Center stands ready to handle direct inquiries to manufacturers. The center also is available to advise U. S. companies on import duties, shipping procedures and costs, and other facets of doing business with Japan.

Although many U. S. firms still hold to a "buy American policy," resistance toward buying Japanese goods has lessened in the past two years, according to Nakamura. He noted that Japanese manufacturers had been especially successful in building a reputation for quality goods in many lines.

New Minneapolis Office

Minneapolis—L. B. Foster Co., Pittsburgh, a nationwide supplier of steel pipe, rail and construction products, is expanding its staff and warehousing operations here. The company also maintains offices in Houston, New York, Atlanta, Los Angeles, Chicago, San Francisco, Kansas City, Cleveland, Milwaukee and Detroit.

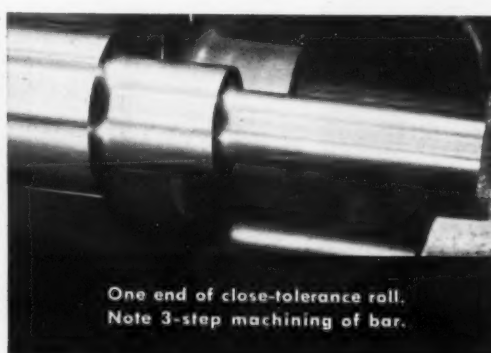
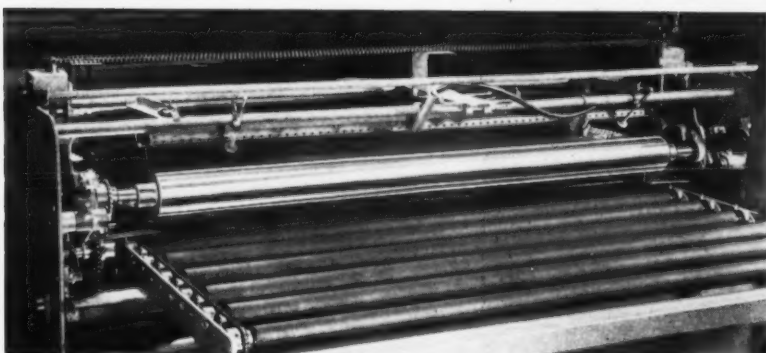


150 OPENINGS BURNED IN HUGE CONTROL PANEL ASSEMBLY

Expert Ryerson flame-cutters burned more than 150 openings in the steel plates that make up this huge control panel assembly.

Each opening had to be located and cut with extreme accuracy to permit proper installation of the complex

instrument system. Distortion had to be carefully controlled and a high degree of flatness maintained so that the plates would have a good appearance when painted. All such requirements were readily met by Metallogically-oriented Ryerson service.



One end of close-tolerance roll. Note 3-step machining of bar.

SWITCH TO LEDLOY® STOPS TEARING...CUTS REJECTS

Manufacturer of roller coaters was having trouble machining C-1018 bar stock to produce a close-tolerance roll. Three-step machining was required at both ends of the bar, and tearing was frequent with up to five stops per cut to regrind the tool.

After studying the problem carefully, their Ryerson specialist recommended a change to Ledloy 300. Results from this fast-machining leaded steel: higher produc-

tion; longer tool life; rejects cut to a minimum.

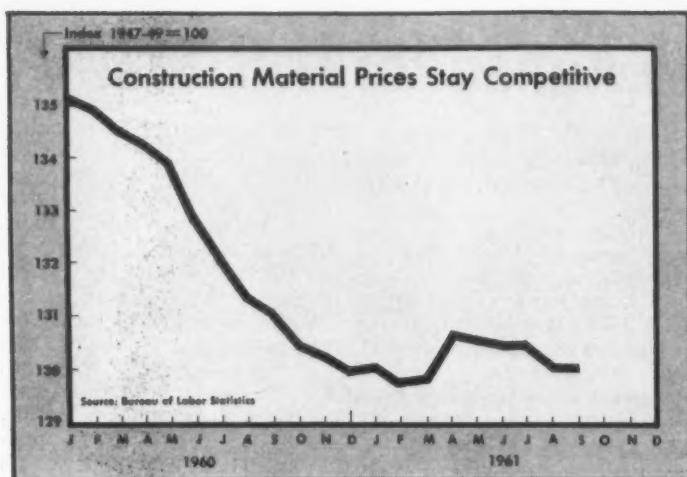
Other steels for this coater, including angles, expanded metal, and cut-to-size side plates, are also supplied by Ryerson.

As the happy P. A. puts it, "Time and time again Metallogics takes me off the spot. It gives me technical help, plus convenient, dependable, single-source service on all my requirements."

RYERSON METALLOGICS

JOSEPH T. RYERSON & SON, INC., MEMBER OF THE STEEL FAMILY

STEEL · ALUMINUM · PLASTICS · METALWORKING MACHINERY



Purchasing Week

November 27, 1961

Price Hikes Seen in '62 for Building Materials

New York—Price outlook for building materials: stability for the rest of 1961 followed by moderate increases starting in 1962. That's the almost unanimous consensus of construction experts.

There are some minor exceptions. Roof insulation tags, for example, are being cut \$6 to \$80/1000 sq. ft. by the Barrett Div. of Allied Chemical. This spotlights the keen competition and excess capacity that provide the key checks on construction materials prices.

But improving demand and currently narrow industry profit margins are expected to strengthen the great majority of building items. Here's a breakdown of price prospects among the major materials:

Cement: Alpha, Ideal, and Permanente have already announced 1962 increases of 10¢ to 15¢/bbl. for bulk, and up to 25¢/bbl. for bagged cement. Marquette indicates it will post "moderate" boosts. Other producers leave little doubt that they will follow wherever possible.

Cement hikes will be modified under certain circumstances. The Glen Falls Cement Co., for example, is raising its bulk and bagged quotes by 10¢/bbl. But if foreign prices don't go up also, this increase will go by the boards wherever it has to meet this competition in its Northeast market. Alpha Cement liberalized its discount for prompt payment, reducing its 10¢ and 15¢ increases to 2¢ and 9¢ for customers taking advantage of it.

Lumber—Prices for lumber and plywood were weakened in recent months by the excessive mill inventories created by disappointing home building demand. And with the slack building season imminent, there is little prospect of these tags strengthening in the immediate future.

But production cutbacks in areas such as plywood and the expected improvement in overall demand is likely to bring some increases in the first half of 1962. However, the traditionally quick response of lumber production to demand pickup should keep these tag boosts moderate. Industry analysts feel that it would take a really prolonged surge in lumber sales to do otherwise.

Steel: This area presents the big guessing game. No one expects increases before 1962, but as one expert put it, "Anyone estimating the cost of a construction job for anytime in 1962 would be smart to leave some upward leeway in steel costs."

Other materials: Price for a number of building materials—fibreboard sheathing, gypsum lath and mill board, asphalt strip shingles and roll roofing—have improved somewhat from early-year levels, but are still what Graham J. Morgan, president of U.S. Gypsum, describes as "severely competitive".

Improved demand is expected to firm these prices further, but much of it will come about through a drying up of market discounting. Few increases—and these fairly modest—are expected in published prices.

Wage increases slated for the building trades in 1962 further substantiates the prospect of a moderate rise in over-all building costs. McGraw-Hill's *Engineering News-Record* estimates 1962 hikes will average 3.2% for skilled and 3.9% for unskilled labor, as compared with 1961 figures of 3.6% and 4.4%.

Producer expectations of higher prices are somewhat subdued in view of the optimistic construction forecasts for 1962. The F. W. Dodge report estimates an over-all increase of 7% in construction next year. Residential building is projected to go up 10%, and nonresidential 6%, with a 10% boost in manufacturing leading the way.

But the building materials industry—with this year's experience under its belt—is wary of this rosy picture. And, although the Dodge report says that "the construction market in 1962 will be the largest ever presented to any fabricating industry," it also states that "the present situation promises no let-up in the intense competition for sales and profits."

THE RIGHT ADHESIVE FOR PAPER CONVERTING

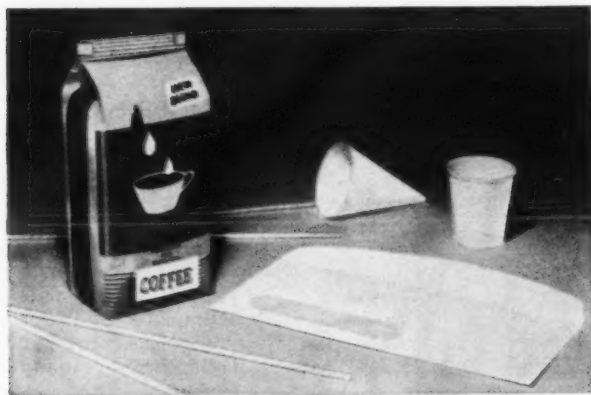
(and how the Arabol man helps you select it)



1. LAMINATIONS. Whether it's paper to synthetics, metal foil to paper, paper to board, or whatever combination — laminating is the growth business. And laminating means bonding with adhesives for strength and other characteristics. The right adhesive is needed to seize two materials with dissimilar surfaces and hold them together as one substance... permanently and economically. Your Arabol man knows laminations. Let his knowledge help you improve your operations.



2. LABELING. Labels on glass, labels on wood, labels on metal, labels on paper and paperboard... labels on most anything! Perhaps you want the label to be as permanent as the container itself; or maybe you want the label easily detachable to permit re-use of the package or confidential treatment of label data. In every case, the service of the label is controlled by the selection of the adhesive. For the most effective use of your labels, at maximum economy, call in the Arabol man to select the best adhesive.



3. PRODUCT FORMING. From paper cups to coffee bags, soda straws to storage cartons, window envelopes to paper cans... paper converting needs adhesives application. As new items appear, or improved versions of conventional lines win added acceptance, it becomes important to choose the most efficient, most economical adhesive. In determining the one adhesive formulation that is best for your specific needs—your Arabol man can aid you.



4. PACKAGING. Achieve maximum utility in closing and sealing your cases and cartons — for immediate delivery and dispensing, or for extended storage with better protection for contents against contamination, damage and pilferage — with the correct adhesive designed for your requirements in this application. The unexcelled knowledge of your Arabol man covers case sealing as thoroughly as all other adhesive applications. Let him work with you.

INCREASE YOUR ADHESIVE KNOW-HOW... Read our informative quarterly bulletin, the Arabol Adhesive Advisor, filled with facts, news and views on the adhesives industry. It offers valuable time and money-saving tips, culled from Arabol's 76 years of adhesive experience. Write on your letterhead to: Editor, Arabol Adhesive Advisor, 110 East 42nd Street, New York 17, N. Y. There will be no charge, of course.



ARABOL ADHESIVES

14 PLANTS AND WAREHOUSES TO SERVE YOU ON A LOCAL BASIS
THE ARABOL MFG. CO., 110 EAST 42ND STREET, NEW YORK 17, N. Y. • CHICAGO • SAN FRANCISCO
LOS ANGELES • ST. LOUIS • MARIETTA, GA. • DELAWARE, O. • PORTLAND, ORE. • ITASCA AND
MCALLEN, TEX. • PHILADELPHIA • BOSTON • DENVER • TAMPA • LONDON, ENG.

GE Introduces Powerful New Circuit Breaker

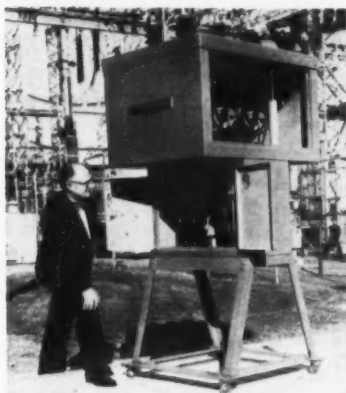
Philadelphia — General Electric Co. has developed a powerful short circuit breaker which uses a vacuum to squelch sudden surges of high current such as occur when lightning strikes power lines.

GE said the new interrupter should need only about one-fourth as much maintenance as conventional interrupters, which use oil, air or gas to snuff out short circuits.

Circuit Recloser

First application of the new device is in a circuit recloser for utility company sub-stations. GE said the recloser will sell in a range of \$2,500 to \$4,000, depending on current rating. This range is virtually the same as for standard units.

Circuit reclosers with the new vacuum interrupter will be available for delivery by the third quarter of 1962, GE said. Several special models already have been sold and will be in trial use



CIRCUIT RECLOSER: GE official inspects new unit which snuffs out short circuits using a vacuum.

by late this year or early 1962, the company added.

"The ideal," said H. W. Gouldthorpe, general manager of GE's Switchgear and Control Div. here, "has always been to quench

short circuits in a vacuum, without the presence of toxic or potentially flammable material."

A Forerunner

Gouldthorpe and Dr. Guy Suits, GE vice president and director of research, said the new recloser is "the forerunner of the power breaker of the future." Its development marks the first step toward providing utilities and industry generally with a complete line of oil-less, high-speed breakers, the company said.

GE spokesmen said the vacuum interrupter, in less than 1/30 of a second, can snuff out a short-circuit more than 30,000 times that which may occur in a home. The new recloser has a rated interrupting capacity of 8,000 amp. at 15.5 kv and 12,000 amp. at 4.8 kv. Its instantaneous clearing time is less than two cycles, including fault sensing, tripping, and circuit interruption. The company said it is believed to be the fastest heavy-duty circuit recloser on the market today.

American Liberty Oil Co. Acquires Machinery Firm

Dallas—American Liberty Oil Co. announced it has begun a rapid expansion program with the purchase of Crown Machine & Tool Co., Fort Worth. As part of the program, a \$1-million manufacturing plant will be built in the Great Southwest Industrial District between Dallas and Fort Worth and will be in operation by June 1962.

The firm manufactures machinery used in the packaging and molding of polystyrene and related products. The expansion program is designed to fully

develop the company's growth in the molding of styrofoam and manufacture of equipment and machinery for the plastic industry.

New Lone Star Steel Mill

Dallas—Lone Star Steel Co. is planning construction of a \$20-million extrusion mill to produce pipe for the oil industry. Firm officials estimate the mill will add 300,000 tons to Lone Star's annual capacity.

The company said it also is completing construction of a spiral weld pipe mill which is expected to begin shakedown production by year end.



BOSTRON

THE BELT WITH THE HAZARD-PROOF CARCASS!

'Major Breakthrough' Claimed for New Additive For Diesel, Heating Oil

Niagara Falls, N. Y.—Lloyd's Laboratories of America, Inc., has begun making a new additive for diesel and heating oil which it said represents a "major breakthrough" in preventing air pollution.

Fred J. Laubaugh, president of the company, said the new additive, by making the combustion process more efficient, also reduces the amount of fuel required by 20% to 30%.

Laubaugh said the additive costs \$4.95/gal. in 55-gal. drums and \$6.50/gal. in five-gal. cans. One gallon of additive is used for every 400 gal. of fuel.

The new additive, which will be sold under the name "Profit," increases the amount of oxygen at the combustion point, liquefies sludges, absorbs moisture, and reduces viscosity. End result, said Laubaugh, is that the fuel is completely burned, and carbon, smoke, and soot "totally eliminated."

Laubaugh said the additive has been field tested for the past five years in Canada. The tests were conducted with light and heavy oils used in industry, vehicles, and homes.

WILL NOT ROT OR MILDEW — Constantly running salt water cannot rot or mildew 2-ply BOSTRON belt at J. H. Miles Co., Norfolk, Va. No deterioration from fastener rust, no fastener holding problems.

OUTSTANDING WEAR — Constant impact and friction from razor-sharp oyster shells has not affected the 1/8" Dulon Cover on this

BOSTRON belt. Says Mr. Frank M. Miles, President, "Our BOSTRON belt is good as new after 4 years operation . . . Exceeded every expectation!"

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Management Memos

Clock It In

Information needs time and date stamp, no matter whether its a paper you are filing in a cabinet, a figure for an accounting report, or a fact you are tucking in the back of your mind. Reason: Information is perishable.

An article in *Nation's Business* magazine points out that a piece of information accurate when it is first introduced may be inaccurate in a minute, a day, a month, or a year from that time. The problem is that some things change rapidly and noticeably, like a stock market price, while others change slowly and almost imperceptibly, like the output capacity of a production line. That's the reason for the time label.

The magazine points out that one of the management functions that particularly needs time-tag attention is evaluating subordinates. Invariably any striking incident in the course of a man's performance will get special attention. If time labels are attached to these incidents, they can be highly useful in evaluation, but if not, then there is a danger of misjudgment.

In one example, several department heads in a large firm were asked to pick one candidate each from among their subordinates for a special project. One department chief announced his choice immediately. Impressed by such speed and confidence, one of the president's assistants dropped around to discuss the choice.

The department head described a very impressive day—three years earlier—in which his candidate for the new job had made a very good showing. But before going overboard, the president's assistant asked to see the man's complete file. Further study revealed that the person in question had a distinctly mediocre record both before and since his big day and had often shown reluctance to take on responsibility.

Loss of the important time label on the candi-

date's big day led the department head to forget that the occasion was only an isolated instance. And this led to a misconception over the candidate's real abilities.

New Efficiency Measure

Despite the fact that productivity measurements are being used extensively in individual industries and for the national economy, companies using them are still few and far between, according to a recent National Industrial Conference Board study.

Generally, efficiency at the company, division, plant, and department levels continues to be gauged by such traditional criteria as output, profitability, and unit cost, the NICB study points out. Reasons for the lack of acceptance of productivity measurements are unawareness that such measurements have management uses and unawareness of technical progress contributing toward measurements at the plant level, says NICB.

In the companies that do use productivity measurements the Conference Board found that these measurements had varying applications. Some use it to gage only shop productivity, but others use it for total productivity comparisons measuring the changing relationship of all inputs—labor, purchased materials and services, and capital to output.

Advantage of productivity measurements, the NICB says, is in obtaining reference points for viewing profits. When compared with those of competing firms or from the entire industry, they offer evidence of relative changes in productive efficiency. They also can be valuable in comparing productivity in the manufacture of specific products at different locations, and aid in keeping plant managers and other officials alert to methods of improving operating efficiency.

Purchasing Parade

Personal glimpses of P.A.'s as they march by in the news



fencing title in the Chicago District of Amateur Fencing Assn. in 1950.

However, in recent years fencing has taken the back seat to other activities, but he maintains an interest and hopes "sometime" to again have time for fencing.

Many P.A.'s these days are heading for the hills and the great outdoors, looking for relaxation and exercise. Among those infected by the wanderlust are:

• **John M. Pierce**, recently retired P.A. for the City of Wichita, Kansas, whose ambition is to hike to the bottom of the Grand Canyon. He plans to take his long-anticipated vacation there with Mrs. Pierce as soon as he can arrange it. (She says he will have to go this hike alone.)

Hiking is one of Pierce's favorite pastimes, and he takes frequent walks along the Arkansas River near his home. His most memorable travels have been trips to Colorado and hiking in the Rocky Mountains.

History-reading also ranks high with Pierce and makes him a favorite customer of the Wichita City library. He gets all the new books that come out, has a special fondness for ancient history, and sometimes finishes a book in an evening. He's read the Bible through several times, following a long-time practice of daily readings.

• **Edgar G. Rowe**, new P.A. at Cleveland's Forest City Publishing Co., has a collection of more than 600 Indian artifacts as a result of his many vacation camping trips in the Midwest,

searching for bird points (small arrowheads which the migratory Indians used to hunt with), flint drills, and hammerstones.

• Recently assigned as Asst. P.A. at Great Lakes Steel Corp. (Ecorse, Mich.) **James V. Clifford** is an all-round sports enthusiast. He hunts, fishes, and bowls a 178 average.

Adept at handling a shotgun, Clifford takes careful aim and manages to pick off pheasants in short order. For the past 10 years he chalked up a perfect record of bagging the two-per-day limit, ferreting out the birds in the Flat Rock, (Mich.) area.

Skilled, also, at handling a rod and reel, Clifford and his wife, after spending several summers fishing throughout Michigan, sought more adventuresome territory. They found it in the Hudson Bay region. On the first leg of their journey they drove 500 miles to Chapleau, Canada, and from there chartered a bush pilot to fly them some 240 miles into the Hudson Bay area. The site they chose afforded several small lakes excellent for trolling; their choice of location was obviously wise—both brought back the limit of six Walleye and six Northern Pike. Clifford says, "I've never had a more rewarding or better vacation in my life and am looking forward to returning next year."

Meantime, **John W. Edwards**, new Purchasing Manager of Guiberson Corp., a division of Dresser Industries (Dallas) has a "hobby" common to all family men—"beating his school children to the bathroom in the morning."

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Purchasing Week Asks

How do you differentiate competition from price cutting?

Question asked by: George Horhota, assistant to purchasing agent
Brooklyn Union Gas Co., Brooklyn, N. Y.



Elmer Bouvier, purchasing agent, Kenskill Trailer Corp., Sun Valley, Calif.:

"Before competition and price cutting can be differentiated, suppliers and materials involved must be investigated. When a representative approaches me with a price that is far under the current one, I am inclined to be skeptical until I can discover whether the 'price cutter' is merely attempting to disrupt competition, or has justifiable reasons—such as improved manufacturing methods—or less costly amortization of tooling, etc. Accepting price cuttings, without complete knowledge of the reasons, can be costly to the buyer if he is not aware of the justification."



Elsie MacLeod, director of purchasing, Fancher Furniture Co., Salamanca, N. Y.:

"Competition is the result of vendors improving their manufacturing processes, and substituting new materials or new items which will meet the requirements of the buyer at a lower cost. A vendor who lowers his prices for no reason other than to obtain an order is price cutting. The buyer who deals with companies who make a practice of price cutting should not be surprised that, along with the lower price, he gets poorer quality material and late deliveries."



D. E. Short, purchasing agent, International Shoe Co., St. Louis:

"This is a matter of decision concerning the integrity and reliability of the vendor making the offer. Price cutting is normally done by suppliers who are not presently receiving orders or only small orders. While price is of utmost importance, we will not sacrifice necessary quality and service merely to obtain lower prices, nor are we interested in one-shot propositions. All offers of lower prices are carefully analyzed and the final decision hinges on our determination of the supplier's ability to continue competitively."



J. J. Walsh, assistant purchasing agent, Bergstrom Paper Co., Neenah, Wisc.:

"Competition has a stimulating effect on business. Quality control along with new and improved methods receive keen consideration. Price cutting, on the other hand, creates an unhealthy condition which, in time, will undermine the stability and reliability of the supplier. To differentiate between the two, it is essential to understand the past history of the supplier."



A. H. Arnholter, purchasing agent, Roll Forming Corp., Shelbyville, Ky.:

"We maintain there are many reasons for buying a product from a supplier. Price is only one of them; delivery performance and quality of material must be considered. Many suppliers offer engineering service and a personal interest in your problems. The sales representative who calls on you regularly, looks for ways to improve your operations, and take a personal interest in your problems, is selling much more than price. He is a real competitor."



D. G. Gelford, assistant purchasing agent, Andersen Corp. (sash, doors, etc.), Bayport, Minn.:

"I think of competition in terms of service, consistent quality, helpful ideas, development of new products, reliability and, of course, prices that are in line. Instances of improvements in our products resulting from competition among our suppliers are legion. I think of price cutting as a questionable practice any time, often a device to 'get in the door.' Suppliers whose policies permit this sort of activity are not likely to be reliable or consistent in other aspects."

TOM BIGBEE SAYS:

"the neatest,
cleanest washrooms are
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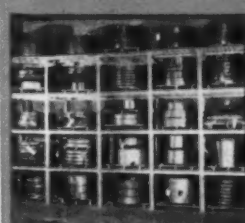
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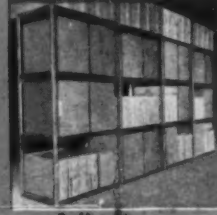
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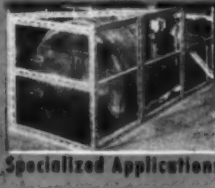
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UNVEIL NEW COPTER: Hiller Aircraft Corp.'s turbine-driven Ten99 helicopter is shown picking up oil drums in a military exercise. The craft seats six, carries a half-ton of cargo, has many civilian uses.

New 'Copter Unveiled

Palo Alto, Calif.—Hiller Aircraft Corp. has developed a six-passenger turbine-driven helicopter with a variety of military and civilian uses. The craft—the "Ten99"—was demonstrated for the first time in Washington last week.

The Ten99 can carry six passengers or a half-ton of cargo, twice the capacity of piston-driven 'copters of similar size. Although designed primarily as a military vehicle, Hiller said the craft also has applications in executive transport, short hauls of light cargo and in taxi and commuter transit.

New York P.A. Group Holds Forum On Ethics of Corporate Gift-Giving

New York—A salesman and a purchasing agent squared off at the New York P.A. Assn.'s Office Supply and Equipment Forum on a timely question—How do you qualify the Christmas gift giving problem?

Victor Horton, director of sales for Goodyear Printing and Stationery Co., said he favors giving gifts to customers if the gift, circumstances, and motives are right.

Discussing the problem of the

"Cadillac" gift—an item which in his view is payola rather than a gratuity—Horton said the motive for such a gift would be bribery. If such a gift is given, the company obviously operates with an excessive profit margin which is unusual in today's business operation. "If such high profit margins exist," Horton quipped, "the P.A. should review his supplier's price list."

On the negative side, George Kievning, P.A. for the Worthington Corp., said gift-giving complicates a future relationship with the vendor and that nothing should interfere with the buying decision.

"What grows out of this situation," Kievning pointed out, "is that favoritism is allowed to develop. And in the long run the best interest of the purchaser's and supplier's company is damaged."

His rule on gifts is: A man is judged by the service he provides, not the gift he gives.

At the dinner meeting, Russell T. Stark, NAPA president, discussed "Professionalism Through Negotiated Purchasing." The New York address was a part of Stark's Eastern speaking tour which carried him to the Erie, Pa., association and the Purchasing Agents Assn. of Rochester within a week.

To the New York group Stark said, "Success of the modern P.A.'s negotiations is as important to his company's profit picture as are the successful settlements hammered out at the bargaining table of the labor relations experts."

He pointed out that negotiation skill will be a critical asset for the buyer of the future.

GSA Slates New Sales Of Metals and Minerals

Washington — The General Services Administration has scheduled sales of several metals and minerals, including uranium-bearing and zircon ores.

A total of 875 tons of tin will be sold Nov. 29. The bulk of the tin—850 tons—is Grade A type; the rest is Grade B.

GSA also is selling 8,132 short tons of baddeleyite, a uranium-bearing material often used as a refractory. Buyers must get a license from the Atomic Energy Commission to transfer ownership. Bids must be submitted by Dec. 21.

Zircon concentrates and zirconium-bearing ores also will be sold on Dec. 21. GSA is offering 1,732 short tons of zirconium-bearing ore from the national stockpile and 3,975 short tons of zircon concentrates.

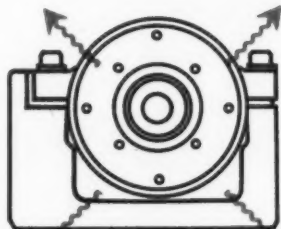
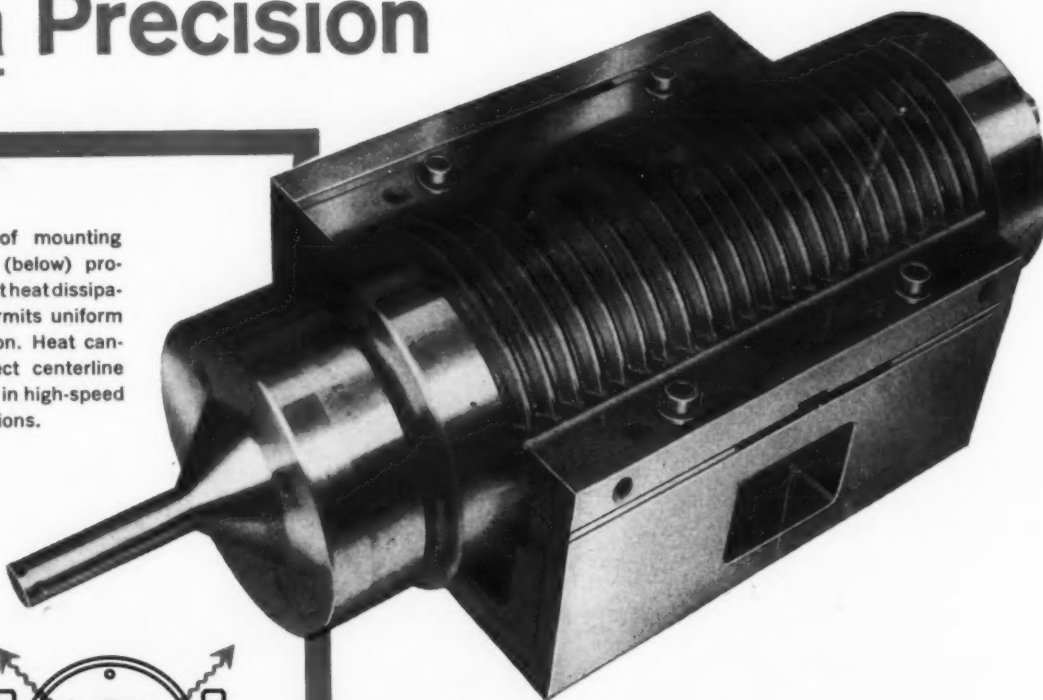
PPMA Widens Roster

Chicago—The Precision Potentiometer Manufacturers Assn. is opening its membership to key suppliers in the industry. Only well-qualified suppliers who can make a technical contribution will be invited to join, however, said D. C. McNeely, PPMA president.

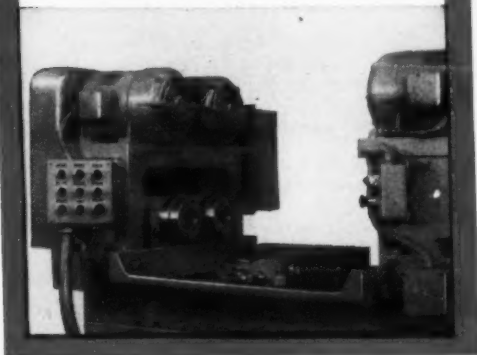
The association will hold its second annual meeting at Hollywood, Fla., Jan. 24-26.

NEW Ex-Cell-O Spindles for Ultra Precision

Design of mounting bracket (below) provides fast heat dissipation, permits uniform expansion. Heat cannot affect centerline position in high-speed applications.



Below: This standard double-end Ex-Cell-O Precision Boring Machine provides a steady platform for the ultra-precision boring job described at right.



The special spindle shown above is one of 16 identical Ex-Cell-O Ultra Precision Boring Spindles recently developed for an extremely demanding boring operation.

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Why do the new Ultra Precision Spindles and other standard and special Ex-Cell-O Boring and Grinding Spindles give consistently greater accuracy, finer finishes and longer, trouble-free life?

The answers are: Engineering and production experience (more than 40 years); exclusive design and construction (using famous Ex-Cell-O Spindle Bearings); and job-tailored availability (Ex-Cell-O offers the most comprehensive line of belt-driven, air-driven, motorized and high-frequency spindles available today).

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Transportation Memos

SHIPPERS WARNED: The American Trucking Assn. has asked the ICC to start cracking down on shippers using illegal transportation. Up to now, the ICC has concentrated on the carriers themselves, although the law says a shipper who "knowingly and willfully" uses an illegal carrier can be prosecuted.

The ATA has been reluctant to go after shippers in the past for fear of antagonizing customers. But the association members now feel they are losing so much business to illegal carriers that they have to adopt a "let the chips fall where they may" attitude.

Most common illegal operation is believed to be the agreement by a carrier to make pick-ups and deliveries outside his authorized area. Traffic experts say P.A.'s should protect themselves against possible prosecution by obtaining written copies of their carrier's authorization when routing shipments.

CONTAINER STUDY: Leading Canadian manufacturers and carriers have decided to make a six-month study to determine the feasibility of using containers.

Decision came at the recent conference on containerization sponsored by the Canadian National Harbours Board at Toronto, U. S. truckers and motor equipment manufacturers also attended.

If the Canadians should decide to make a big push for containerization, their next task will be to decide whether to adopt the large U. S. standard sizes or the more compact European specifications. This would probably involve another six-month study.

STOP-OFF CHARGES: Shippers in the Eastern-Central area applauded the decision by the rate committee of the Eastern-

Central Motor Carriers Assn. to quash a proposed amendment in the association's rules governing stop-off charges.

The change, backed by a few carriers, would have reduced the stop-off charge from \$18.61 to \$14. However, it also would have redefined a stop-off to include pick-ups and deliveries. Thus, on a shipment from New York to Chicago, with a stop-off at Pittsburgh, the total charge would have been increased from \$18.61 to \$42.

TOLLS REDUCED: The New Orleans Dock Board reduced its wharf tollage charge on general cargo from 28¢/ton to 15¢/ton on Nov. 14 in an effort to stimulate the flow of traffic through the port.

The action eliminated a 13¢/ton boost in tollage charges which the Dock Board put into effect Jan. 1, 1959. General cargo business at the port has declined during the past year, and some steamship lines and agents privately blame this on the 1959 increase. The railroads, for instance, had refused to pay the additional charge and passed it along to shippers, forcing the cost of import-export cargo up 13¢/ton for transit through New Orleans.

BENEFITS OF FLEXIBILITY: The ICC's decision to liberalize its definition of "liquid chemicals" to enable truckers to offer complete service to chemical producers was hailed by chemical buyers.

Producers could see no immediate changes in the prices of end-products as a result of the ruling. But in the long run, they said, it will permit a more flexible transportation policy which will tend to force prices down slightly.

The ICC ruling erased what the Commission termed a "hair-splitting distinction" between raw liquid chemicals and finished liquid chemicals. Prior to the ruling, carriers required separate operating authority to haul the end products.

DOOR-TO-DOOR RATES: Delta Air Lines plans to start offering rates for combined air and truck shipments on flights from Los Angeles in December. Delta, which first put door-to-door rates into effect on several of its Eastern routes last month, said the new plan will reduce the cost of air-truck shipments by 40%.

WHISTLESTOPS: New York Central Transportation Co. has expanded its 600-truck fleet with the purchase of 24 International model CO-205 tractors . . . C. E. Woolman, president and general manager of Delta Air Lines, has been elected director of REA Express . . . BOAC recently made what it said was the heaviest cargo shipment ever flown out of Cleveland; 16,484 lb. of electrical stove parts bound for Manchester, England . . . Consolidated Freightways, Menlo Park, Calif., expects to take delivery of 100 new tractors and 200 trailers before the end of the year . . . American Airlines has developed a reusable corrugated container for small air freight and Air Express items . . . Reynolds Metals Co. is having two T-2 tankers converted into self-unloading bulk carriers. Company expects them to be ready by late 1962.



PROBLEM: How to get shoppers to buy your product for the first time.

SOLUTION: International Paper's versatile Mosscoat® prints and finishes brilliantly to give you cartons with impact.

INTERNATIONAL PAPER's remarkable Mosscoat takes all printing processes brilliantly. And you can varnish it, lacquer it, wax it, emboss it. Mosscoat finishes beautifully. Gives you cartons that move off today's crowded shelves.

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From One P.A. to Another



**CONSULTANT
GEORGE A. RENARD**
Former NAPA Executive Secretary

**Discusses
Conflict of Interest**

Management has become oversensitive because there is much loose talk about questionable trade practices. Purchasing can help to ease the tension. The purchasing policy manual is being given new meaning and importance. It

is being prescribed as a remedy for some ills that seem to have beset the business fraternity.

You can make a hit with the inner sanctum by recording the fact that any ethical delinquency in purchasing is out of bounds.

The tax-gatherers have become suspicious of any "depletion of profits" that is charged to business expenses. The company stockholders are in the same boat. Both have a direct line to the ears of the chairman and the president.

Do not discount the obvious. The exposure of a few bad examples of "conflict of interest" has management on edge. No wonder—when this broad definition comes from the expert adviser, Price, Waterhouse & Co.:

"Conflicts of interest arise when the personal economic activities of an officer or executive conflict with his responsibilities to the business. He is compensated for devoting his full time and energy to the growth and success of the company. He should not utilize the advantage and influence of his position except

for the company's interest."

Conflict of interest, on that diagram, covers a multitude of smooth dodges, with no seasonal or occupational allowance. With the whole ball of wax moved upstairs, what you know is not bad may not look good.

What is the company's purchasing policy and procedure has become a favorite question by stockholders at their annual meetings. Are purchases made competitively and is competition welcomed? Do orders go to suppliers who offer the best values?

In many instances, there are informal understandings within a company as to those matters. Now, say the legal advisers, such informal understandings must be put into an appropriate record.

The first step recommended is that a clear definition of the company's established policy on "authority to purchase" be expressed in writing, and presented to all concerned in suitable form. A Manual of Purchasing Dept. Procedure is suggested as being

SILICONE NEWS from Dow Corning

Lubricants That Survive



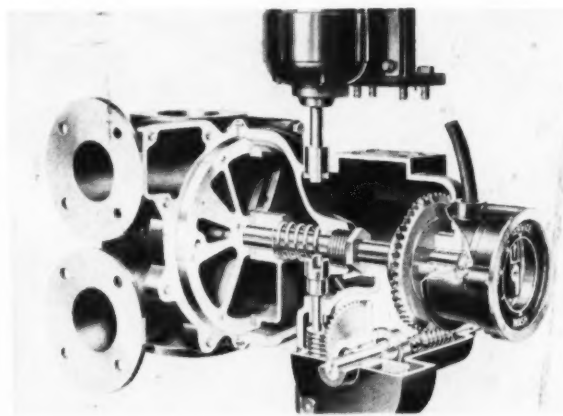
Extreme Heat. At Erwin Mills textile plant, Coolee, N. C., bearings on the shaft of a revolving drier operate in an ambient temperature of 300 F and meet hot steam entering through the shaft. Bearing lubrication was reduced from an every-other-week job to a twice-a-year job with silicones. Silicone lubricants withstand heat up to 450 F . . . stay on the job where ever heat is a problem, such as oven conveyor systems, exhaust fan bearings and heat sealing equipment.



Caustic Contact. Dow Corning Valve Seal, a non-reactive valve lubricant, prevents sticking and leakage. One use: to assure ease of operation and proper sealing of valves on railroad tank cars carrying chemicals. In process plants, too, inert silicones coat the valve seal and mechanism . . . resist corrosion . . . assure a leak-proof seal that lasts. Another use: to keep bolt threads from binding at temperatures to 600 F, ease annual teardown of process equipment.



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Conditioning Chemicals. Rubber and bronze parts located in multi-port valves of water conditioning equipment made by Permutit Company are lubricated with a silicone compound. Highly water repellent, silicones assure long-lasting seals, won't react with or contaminate chemicals passing through, won't attack rubber, and protect bronze against corrosion. Silicone greases, oils and compounds are outstanding special purpose lubricants in new equipment designs and in the maintenance of production equipment.

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Send for Policy Manual

You still can obtain a free copy of Purchasing Week's authoritative policy manual guide. Published as a special service to readers on Feb. 22, 1960, this detailed instruction book on how to compile a Manual of Purchasing Policies and Procedures was prepared by P/W Consulting Editor F. Albert Hayes, former NAPA President and retired purchasing director of Bigelow-Sanford. Address your request to The Editor, Purchasing Week, 330 W. 42nd St., New York, 36, N. Y.

the most practical and convenient means of spelling out the company's supply management policies.

A sign of the times is to be found in recent addition to the policy section of Aluminum Co. of America's comprehensive "Standard Procedure for Purchasing."

The new "conflict of interest" policy limitation reads:

"A Buyer who has any financial or other interest in a supplier company shall so report in writing through his superior to the officer who has responsibility for the purchasing activities of the company. Such officer will decide whether the financial interest in question is of sufficient magnitude as to warrant the disqualification of the Buyer concerned from handling purchasing contracts with—or negotiating Alcoa purchases from that supplier."

This pioneer among manuals includes a special section on "Relations With Salesmen" and another on "Legal Aspects of Purchasing." A forward by Alcoa's president designates its contents as the official basic purchasing policy for the company.

To summarize: It is smart to give an assist to this movement by management to assure respect for company policies by all departments.

New Pipe Plant

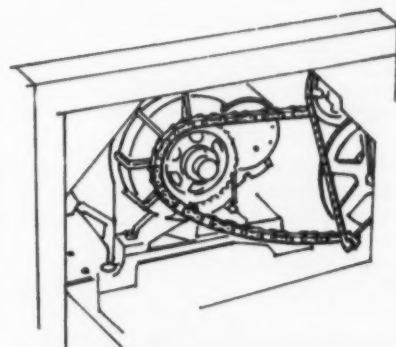
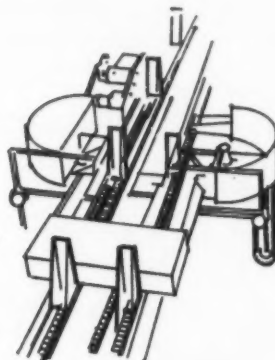
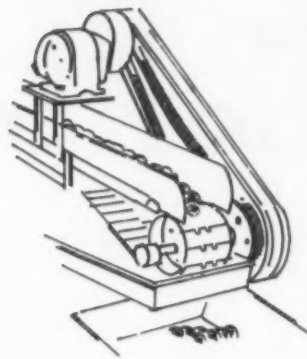
Hillsboro, Tex.—Keasbey & Mattison Co., Ambler, Pa., manufacturer of asbestos and asbestos-cement products has opened a new multimillion-dollar asbestos-cement pipe plant here.

Now,
when you can't
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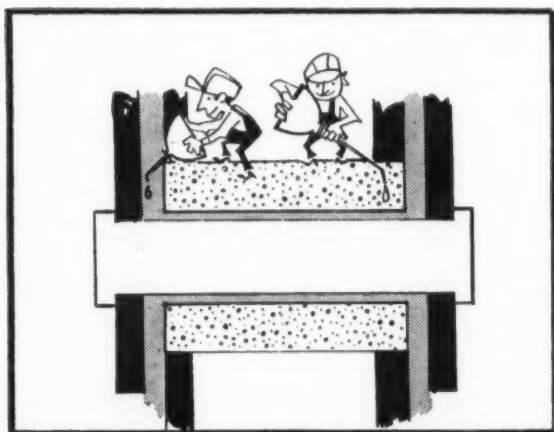


It lubricates itself! You can use it where you need the strength, the wear life, and the quiet, precision operation of a roller chain. But it reduces the need for repeated lubrication, which is so important to chain life.

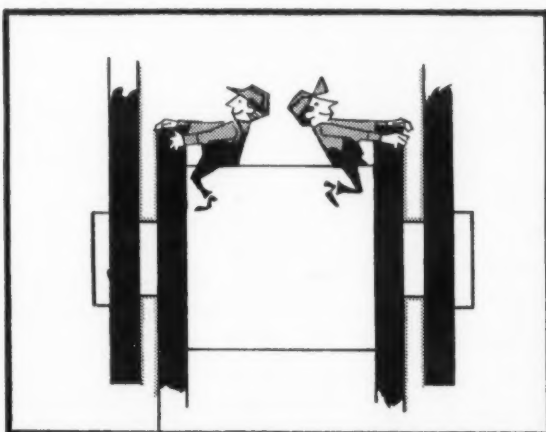
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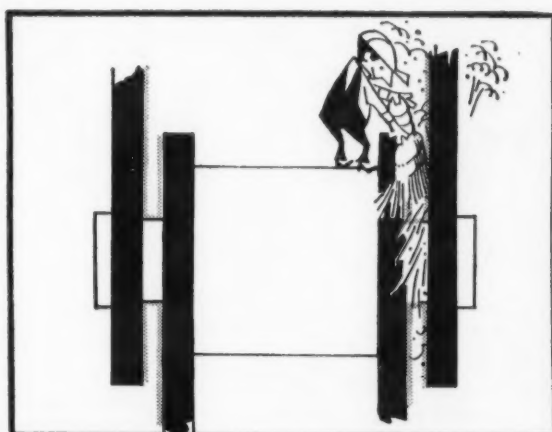


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School for Strategists

A gain "School for Strategists" gives you a chance to work out as a Gamesman on the new, sophisticated version of the strategy game that's more typical of real situations. Using the little boxes as guides to orderly thinking, you'll practice decision-making in two situations devised by John M. Owen, P/W Consultant.

For a warm-up, try your hand at a regular game which deals with the conflict that comes in a reciprocity situation. Then move on to the mixed-strategy type that will put you in the shoes of the "boys in the shop" as they try to fool the time study man.

Review Problem

Two competing companies—Arnold Corp. and Byerson Corp.—want to bid on a contract. Here is their situation:

- If Arnold bids and Byerson does not, Arnold will lose \$2,000.
- If both bid, Arnold thinks he can gain \$1,000.
- If neither bids, Arnold thinks he's \$3,000 better off than Byerson.
- If Byerson bids, and Arnold does not, Arnold figures he's \$2,000 ahead.

What should Arnold do?

1. Sort his possible moves into two logical groups: 1) What happens if he

bids, and 2) what happens if he doesn't. This is what you get:

	Dollar Value of Move to Arnold
Arnold bids, Byerson doesn't.....	-\$2,000
Arnold bids, so does Byerson.....	\$1,000
Arnold doesn't bid, neither does Byerson.....	\$3,000
Arnold doesn't bid, Byerson does.....	\$2,000

2. Now put the dollar value of each move in a box (called matrix) so you can inspect the situation. Write Arnold's moves at the left and Byerson's at the top.

	BYERSON	
	DOESN'T	BIDS
BIDS	-\$2,000	\$1,000
ARNOLD	\$3,000	\$2,000
DOESN'T		

3. Find the lowest value in each horizontal series, and the highest value in each vertical series. Here's what you get:

	BYERSON	
	DOESN'T	BIDS
BIDS	-\$2,000	\$1,000
ARNOLD	\$3,000	\$2,000
DOESN'T	\$3,000	\$2,000*

4. Note that the figure \$2,000—starred for visibility—is common to both horizontal and vertical series. THIS FIGURE IS THE STRATEGIC SOLUTION TO THE PROBLEM. Arnold should not bid and Byerson should.

Now let's convert this game into a much more complex, mixed-strategy situation. Rerig the contents of the matrix. Drop names, zeros, dollar signs and concentrate solely on the arrangement of numbers.

	B	
	8	10
A	9	2

If you follow the procedure in the review game we played above, you'll find that no common number emerges from our new matrix (you'll get 8 and 2 in the horizontal series; and 9 and 10 vertically). Now what?

The fact is that you have been tipped off that no single strategy is going to suffice in this new game. Each player will have to mix his actions. YOUR JOB IS TO DETERMINE THE CORRECT MIXTURE. Here's how it's done:

1. In the horizontal series, subtract the smaller from the larger number in each row:

	B	
	8	10
A	9	2

2. Now reverse the figures you have just found:

	B	
	8	10
A	9	2

3. Now repeat the process in the vertical series—that is, subtract the smaller from the larger number in each column, and reverse your findings:

	B	
	8	10
A	9	2

4. Put the outcome of your horizontal and vertical maneuvers into a composite (that is, combine steps No. 2 and No. 3):

	B	
	8	10
A	9	2

5. You now have the answer to the problem in terms of odds. Here's what you have found: A (or Arnold) should bid 7 times and refrain from bidding 2 times out of every 9 plays. Meantime B (or Byerson) should refrain from bidding 8 times and bid once in every 9 opportunities.

Here are a couple of points to remember about the foregoing:

These rules are for games that are repeated. To play a game only once, use the laws of chance to pick the safest strategy on that one play. For a game with nine chances, put seven long matches (signifying bid) and two short ones (no bid) in a hat, shake well, and draw one. Play the strategy indicated by the length of the match. Don't always play the long odds; your opponent will get wise.

Also when subtracting the smaller from the larger number, remember your algebra. A minus sign becomes a plus in subtraction. Thus 5 minus —5 results in 10.

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2 3/4 x 2	x 2 1/4	x 3 3/4
x 2 1/2	x 2 1/2	x 4
3 x 2	x 2 3/4	4 3/4 x 2 1/4
x 2 1/4	x 3	x 2 1/2
x 2 1/2	x 3 1/4	x 2 3/4
3 1/4 x 2	x 3 1/2	x 3
x 2 1/4	4 1/4 x 2	x 3 1/4
x 2 1/2	x 2 1/4	x 3 1/2
x 2 3/4	x 2 1/2	x 3 3/4
3 1/2 x 2	x 2 3/4	x 4
x 2 1/4	x 3	x 4 1/4
x 2 1/2	x 3 1/4	x 2 1/2
x 2 3/4	x 3 1/2	x 2 3/4
x 3	x 3 3/4	x 3
3 3/4 x 2	4 1/2 x 2	x 3 1/4
x 2 1/4	x 2 1/4	x 3 1/2
x 2 1/2	x 2 1/2	x 3 3/4
x 2 3/4	x 2 3/4	x 4
x 3	x 3	x 4 1/4
x 3 1/4	x 3 1/4	x 4 1/2

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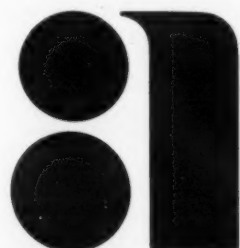
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Problem I. Reciprocity Rumble

The Fidget Machinery Company, manufacturers of widgets, has a reciprocity arrangement with Quality Gadgets, Inc., a supplier. Each offers the other a special price as well as agreeing to purchase the other's merchandise.

Fidget is getting the better of the arrangement, inasmuch as it sells more widgets to Quality than the latter sell gadgets to Fidget. Quality is not very happy with the agreement.

At the same time, Fidget is considering asking for a rise in its special widget price to Quality. Costs have been mounting in the industry for the past few months, moreover, Quality might ask for a price increase on its gadgets.

If Fidget raises its price and Quality also seeks a price hike, Fidget will get its increase without jeopardizing the reciprocity arrangement. Score +5 for Fidget.

If Fidget raises its price, and Quality stands pat on its price, this might give Quality an excuse for ending the deal. Count -10 for Fidget.

If Fidget stands pat, and Quality raises its price, Fidget has a short-term loss, but will be in a good position to seek an increase next year. Count +1 for Fidget.

If both Fidget and Quality stand pat, zero gains or losses take place.

Here's your payoff box:

Should Fidget seek an increase? Should Quality?

Problem II. Time Study Game

The boys in the metal shop are old hands at outfoxing the time study man, Joe Adams. Their main trick is to slow down when they are being timed. Adam's defense is to time the fastest man in the shop, Frank Robot. Every so often the boys fool Frank by working at a normal, rather than a slow-down pace when Adams is timing them. If Adams uses Robot's performance under these conditions as a standard, he submits output quotas that are too high, and winds up being called on the carpet by his boss. The boys in the shop have a big laugh.

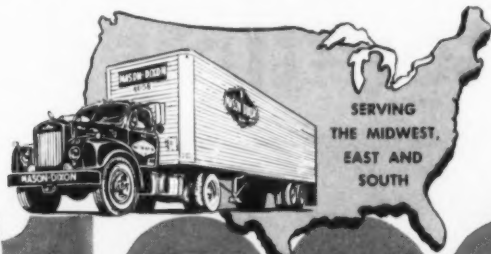
The four possible outcomes might be scored as follows:

	Value to Boys
Boys slow down, Adams times Robot.....	- 5
Boys slow down, Adams times average man....	+ 5
Boys work normally, Adams times Robot.....	+10
Boys work normally, Adams times average man..	- 6

How often should the boys slow down? How often should Adams time Robot?

(Answers to Problems on Page 52)

Job No. 6405 - Nov. 27 & Dec. 25, 1961 Purchasing Week



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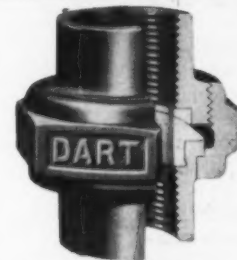
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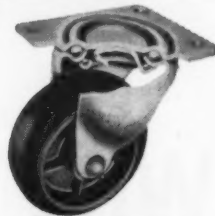
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Home Study Courses Enable P.A.'s To Expand Knowledge, Background

Correspondence courses allow a P. A. to contribute to his own self development. During the recent round of district purchasing

Pro-D Section

conferences, speakers again and again stressed two Pro-D goals: Enrich your purchasing knowledge and broaden your background.

Programs like the correspondence study courses offered by the University Extension Div., University of Wisconsin, Madison, Wis., meet both requirements and permit P. A.'s to learn at their own rate.

Forty students are presently enrolled in the university's industrial purchasing course. In fact, a large Chicago firm is using the course as a training program core and enrolled a group of its purchasing people as a class.

The fee for the purchasing course is \$24 for Wisconsin residents, \$26 for out-of-state enrollees. Certificates of completion are awarded to those who successfully finish the course within 12 months.

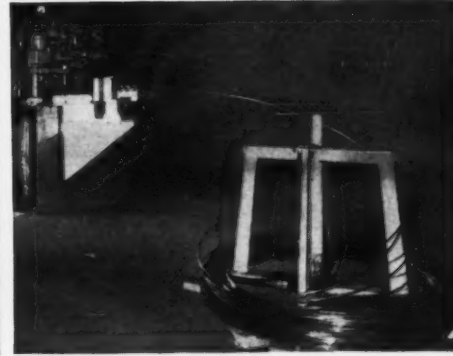
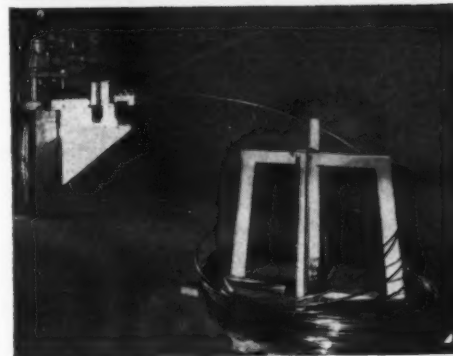
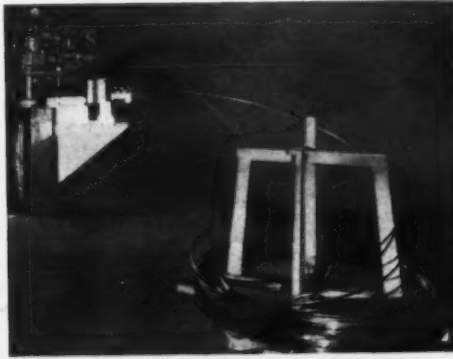
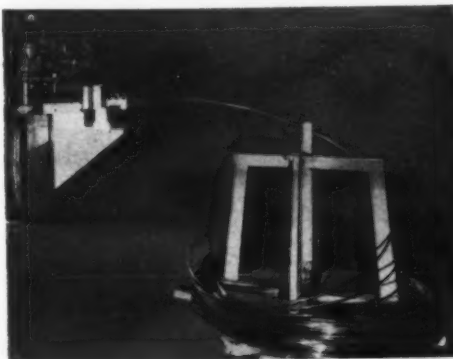
The Wisconsin purchasing course has been designed with a twofold aim: to give the new purchasing employee an insight into the policies and procedures of his department and to acquaint the experienced P.A. with new developments in the field.

Although directed toward the industrial buyer, almost all of the subjects covered are considered equally applicable for the governmental buyer: introduction to purchasing; sources of supply

mail. Students are advised to finish all assignments in the course at least two weeks before tackling the final examination. Finals are given under supervision and may be taken under a local official designated by the student and approved by the University Extension Div.

For a copy of the correspondence study courses bulletin write to: University Extension Div., University of Wisconsin, Madison 6, Wis.

SIGNING UP FOR PRO-D: Some 360 Los Angeles purchasing agents signed up for a six-session clinic on legal administration sponsored by the Pro-D Committee of the Los Angeles Purchasing Agents Assn. Ken Gay, director of material, Atomics International, and a member of the California State bar, conducted the clinic which covered aspects of contract law.



Why set up ten times

Pro-D Pointer

The Houston Purchasing Agents Assn. has a task force at work preparing a manual of duties for both officers and committeemen. And the Purchasing Agents Assn. of North Jersey also has a similar project underway.

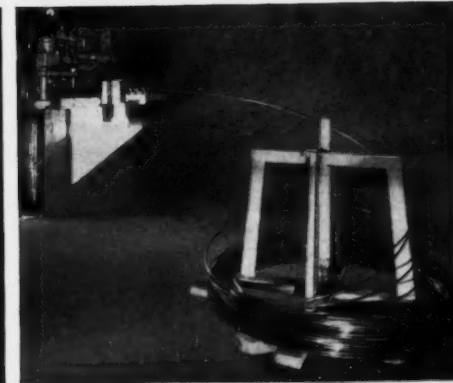
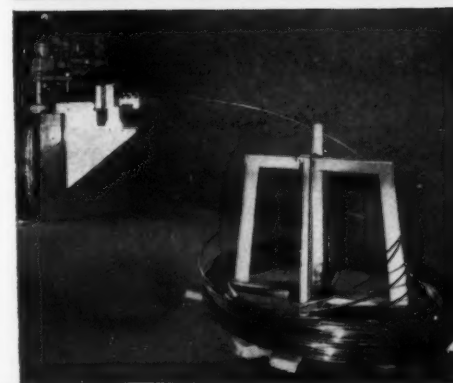
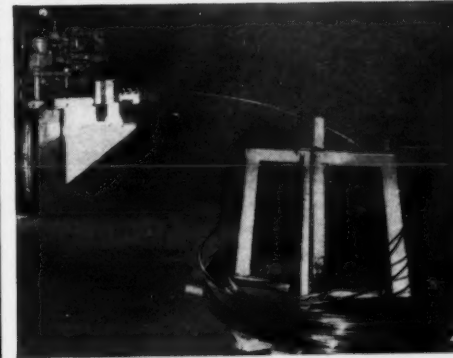
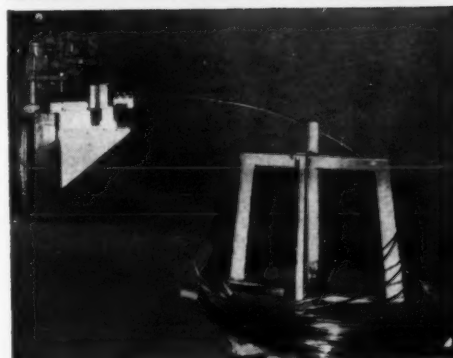
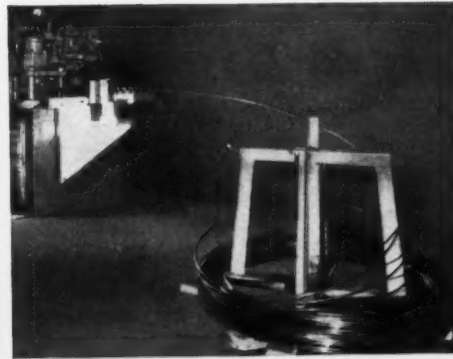
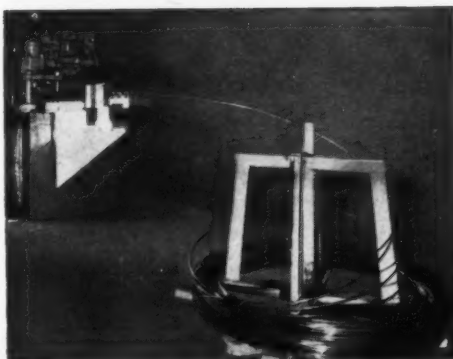
Payoff: Insures smooth transition when new men take over the reins by spelling out for them in detail policy and procedures.

selection; source selection problems; controlling purchase quality; controlling purchase quantity; price; governmental purchasing; make or buy; traffic; scrap; forward buying and speculation; legal aspects; personnel; reports and evaluation; public relations; and major equipment.

The course fee covers a study guide and instruction. However, the price of the textbook—"Industrial Purchasing" by Westing and Fine—is an additional \$7.95.

The course includes 16 assignments and a final examination. It is estimated that each of the assignments requires about eight hours of study. Some may be completed in less time; others may require more time. Students are advised that whether one or several assignments are submitted per week, one gets more value from the course if assignments are completed regularly.

Because there are inevitable time lapses in handling assignments, at least one week is required for an assignment to be received on campus, read, graded, and placed in the return



Professional Development Perspective



CONSULTANT
DR. CLYDE T. HARDWICK

University of Detroit

Discusses the Significance of Doctoral Fellowships in Purchasing

No thoughtful person today would argue against the need of extensive, formal academic preparation of professionals in medicine, dentistry, law, and science. By the same token, the raising of professional sights in the preparation of purchasing men has been gaining new importance.

However one key to the preparation of professional buyers is

the development of interested teachers. Therefore, a balanced program in professional development should and must include the support of graduate students who are to be the teachers of the future. Now this part of the program has been organized and is underway with the announcement that the NAPA will support Doctoral Fellowships.

The NAPA program is a direct appeal to graduate students preparing for college teaching to pursue study and research in purchasing and related fields. If we are to encourage future teachers toward purchasing areas, the time to begin logically is in graduate schools. In my own case, academic research and writing began in this manner. Both my Master thesis and Doctoral dissertation were directly concerned with research studies in purchasing which have continued throughout my teaching career.

This is certainly not an unusual or isolated illustration. Many, if not most, graduate students doing research and study in a particular business area continue along these lines during

their academic lives. Therefore, the time to attract and commit future teachers toward our field of purchasing appears most critically during the doctoral phase of education.

The thing to remember is that, although a few doctoral students may volunteer to take up the purchasing field, many other professional societies and groups are trying to persuade tomorrow's teachers to take other fields.

Consequently, the Doctoral Fellowships of NAPA will now make the purchasing area more competitive in the struggle to enlist young researchers.

In addition to attracting future teachers, the NAPA Fellowships will push the development of research knowledge and publications for the academic field. There's been a perennial lack of data pertaining to purchasing for the student or teacher. In accounting, business administration, personnel, and finance, for example, teachers have vast resources in library material, but not so in purchasing. The fellowship program is one step in the direction of producing library materials pertaining to purchasing.

Moreover, the professionalization of purchasing demands the integrating of faculty research with the needs of business activities. Occasionally the business world accuses the academic world of being too impractical. If and when this is so, the business community is partly to blame, because the two have little mutual contact.

When the business community understands that the role of the university is both research and teaching, misunderstandings are erased or at least reduced to a minimum. Out of research comes new knowledge, extension of old ideas, modification and elimination of false notions, as well as verification of sound practices.

Full time buyers, purchasing agents, or directors naturally are too busy with daily activities to set out on major theoretical projects. Of course, on the job research will continue to solve questions of immediate need, but for the long range and complex issues university researchers will be necessary.

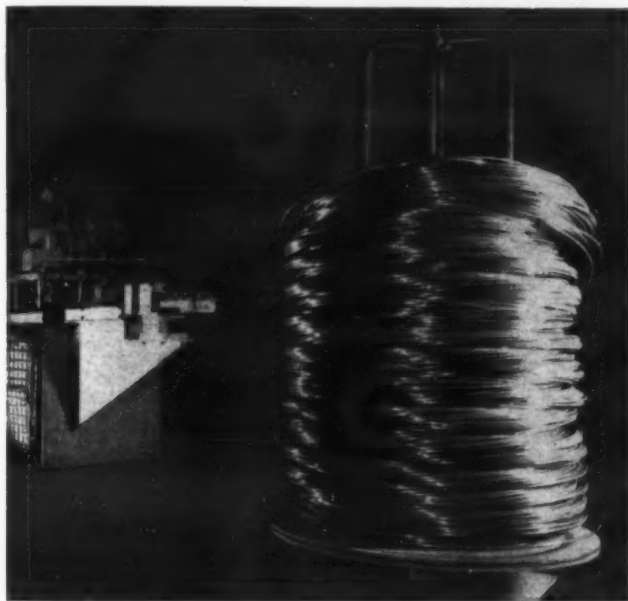
In line with this fact, here are the benefits Doctoral Fellowships will have to purchasing personnel:

- The pursuit of research beyond the practitioner's immediate interests.
- The inauguration of research into newer areas of purchasing interests.
- The advance of research into long-range purchasing problems.
- The attraction of teachers to the purchasing field.
- The development of professional literature.

The development of professional purchasing literature at first glance may not seem important to busy buyers. Nevertheless, it is not unusual that professionals, no matter how advanced, have faced involved problems in which the assistance or guidance of basic reference materials is a must.

Those of us on the campus interested in professional development of purchasing personnel are very pleased with the support of NAPA.

**Pro-D
Section**



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Profitable Reading for P.A.'s

New Books

Guide List for Marketing Research and Economic Forecasting. Compiled by Robert N. Carpenter. AMA Research Study 50. Published by American Management Assn., 1515 Broadway, New York 36, N. Y., 94 pages. Price: \$3.75 (AMA members —\$2.50).

This AMA research study gives a broad outline of available publications and other sources of facts pertinent to marketing and economic forecasting.

This handy reference source places heavy emphasis on directories and bibliographies to the end that, even though a topic may not be covered, the researcher is provided with leads to further, more specialized reports.

Some of the many fields covered include: consumer, industrial, and government marketing; consumer buying habits; probable market conditions 15 years ahead; industry reports on electronics, automotive manufacturing, metal products, chemicals

and rubber manufacture; and more.

Quantitative Analysis for Business Decisions by Harold Bierman, Jr., Lawrence E. Fouraker, Robert K. Jaedicke. Published by Richard D. Irwin, Inc., Homewood, Ill., 358 pages. Price: \$10.60.

This publication covers the use of mathematical tools to help management in decision making.

It discusses such new techniques as: "game theory," mathematical probability, and condi-

tional and expected value, and how they are related to the everyday problems of running a business.

Although the subject matter is relatively complicated, the authors proceed in a logical step-by-step development that can be understood by anyone with an academic background. The authors devote two chapters to the specialized subject of inventory control and explain how optimum inventory can be maintained under a variety of conditions.

Others chapters deal with such diverse topics as linear programming, pricing, merchandising decisions, and equipment replacement.

From the Associations

ASTM Plastics Standards

Tests and specifications relating to cellular plastics, plastic pipe and such materials as epoxies, urethanes, plastisols and organosols are among the 25 new standards covered in the 12th edition of this publication. In addition to the 204 standard specifications, the book also covers a test for measuring the tensile strength of plastics under impact conditions. Copies of this 1,222-page book are available at \$10 each (ASTM members—\$8) from *American Society for Testing and Materials*, 1916 Race St., Philadelphia 3, Pa.

From the Manufacturers

Fasteners

Describes company's line of fastening products, including over 25,000 different sizes and types in stainless steel, aluminum, brass, bronze and Monel. Also classifies over 450 different AN and MS fasteners (32 pages). *Albany Products Co., Inc.*, 351 Connecticut Ave., South Norwalk, Conn.

Communication Batteries

Gives details on company's complete line of lead-calcium grid communication batteries. Includes: weights, cell dimensions, electrical characteristics, and more. Catalog T-532 (14 pages). *Advertising Dept., C & D Batteries Div., Electric Autolite Co., Conshohocken, Pa.*

Handling Equipment

Lists wide selection of new and used material handling and storage equipment, plus a full line of all-steel office furniture. Prices are quoted on all items. (52 pages). *Industrial Handling Equip. Co.*, 1225 W. Monroe St., Chicago 7, Ill.

V-Belt Drives

Gives advantages of company's new line of V-belt drives, consisting of narrower and more powerful belts. One section includes charts and nomographs for designing special drives. Bulletin A695A (42 pages). *Dodge Mfg. Corp., Mishawaka, Ind.*

Shear Selection

Contains design details and specifications for Verson's completely redesigned line of hydraulic shears. Includes slide calculator which simplifies the computation of tonnage required to shear all commonly used metals. Bulletin No. VHS-61. *Verson Allsteel Press Co.*, 9300 S. Kenwood Ave., Chicago 19, Ill.

Machinery Investment

Presents case histories on: setting up completely new manufacturing facilities, revising antiquated production facilities, deciding what operation to automate for greatest return, etc. (14 pages). *Mfg. Systems Div., Designers for Industry, Inc.*, 4241 Fulton Parkway, Cleveland, Ohio.

Steel Linings

Describes uses for clear and pigments linings, in epoxy and phenolic types, and gives advantages and limitations of the various types. Includes actual samples of steel chip linings for pails and drums. (4 pages). *Bennett Industries, Inc.*, 135 Washington St., Peotone, Ill.



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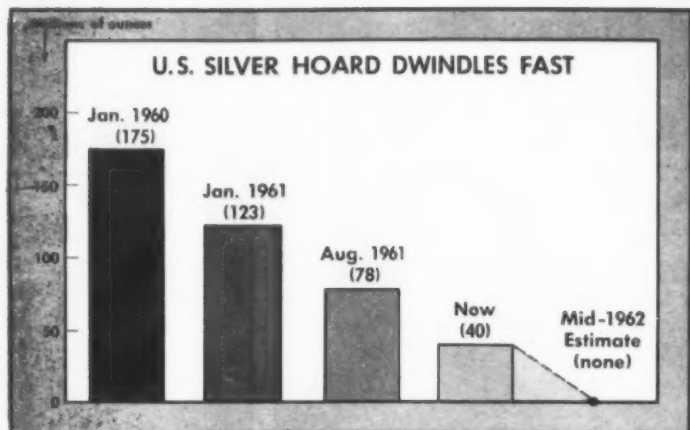
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Purchasing Week

November 27, 1961

Supply-Demand Imbalance Hiking Silver Prices

New York—The price of silver—a key raw material in space age hardware, appliances, and photographic equipment—will soon be going up. With available supply dwindling rapidly, the only question is the timing and the amount of increase.

Silvermen see these factors sparking the growing supply crisis:

• **Increased usage**—All industries that consume silver are growing at a faster-than-normal clip. All told, consumption needs are now rising 5% a year.

• **Sluggish production**—World output is going up by only about 2½% a year. Producers claim that Uncle Sam's buying price (90.5¢/oz.) is too low to stimulate additional output, and they see higher prices as the only solution for boosting supply.

• **Dwindling stockpile**—It's doubtful how much longer the U. S. Treasury will be able to keep prices stable by selling the metal to all users at 91¢/oz., for its once huge stockpile is fast disappearing.

As the chart alongside shows,

at the beginning of 1960, Uncle Sam had 175-million oz. of silver in its hoard. Today there are only about 40-million oz. And according to informed experts, this supply will be exhausted by mid-1962.

Once this buffer stock is gone, the price is bound to rise as users bid on the free market for the limited supply. But some officials think the rise might come even before the stockpile is exhausted; the government is even now considering steps to put prices more in line with current supply and demand trends.

Size of Boost in Doubt

Experts differ about how large a price boost will eventually materialize. Some well-known industry sources (Simon Strauss of American Smelting & Refining, R. M. Reininger of New York, and Honduras Rosario Mining Co.) see the price going up to \$1.05-\$1.10 range—some 15%-21% above current levels.

Other industry figures like Francis H. Wemple of Handy and Harmon (silver fabricators) doubt that the rise will be that much.

But whatever the estimate, all experts are agreed that the current supply-demand imbalance cannot continue. As proof that price rises are imminent, they cite the fact that world consumption last year ran close to 320-million oz.—50% more than the 200-million or so ounces that were produced.

Much of the increase in consumption stems from the tremendous growth of industries using silver. For example, photographic film, the major user of silver (accounting for some 28-million to 32-million oz. a year, or 30% of the total silver market) has been rising by about 10% a year.

Solder and Brazing

The second biggest industrial user (an estimated 20-million to 24-million oz. last year) is solder and brazing, which has been growing at the rate of 6% a year.

These solders are used in automobiles, air conditioners, refrigerators, and other electrical appliances, and in rockets and jets.

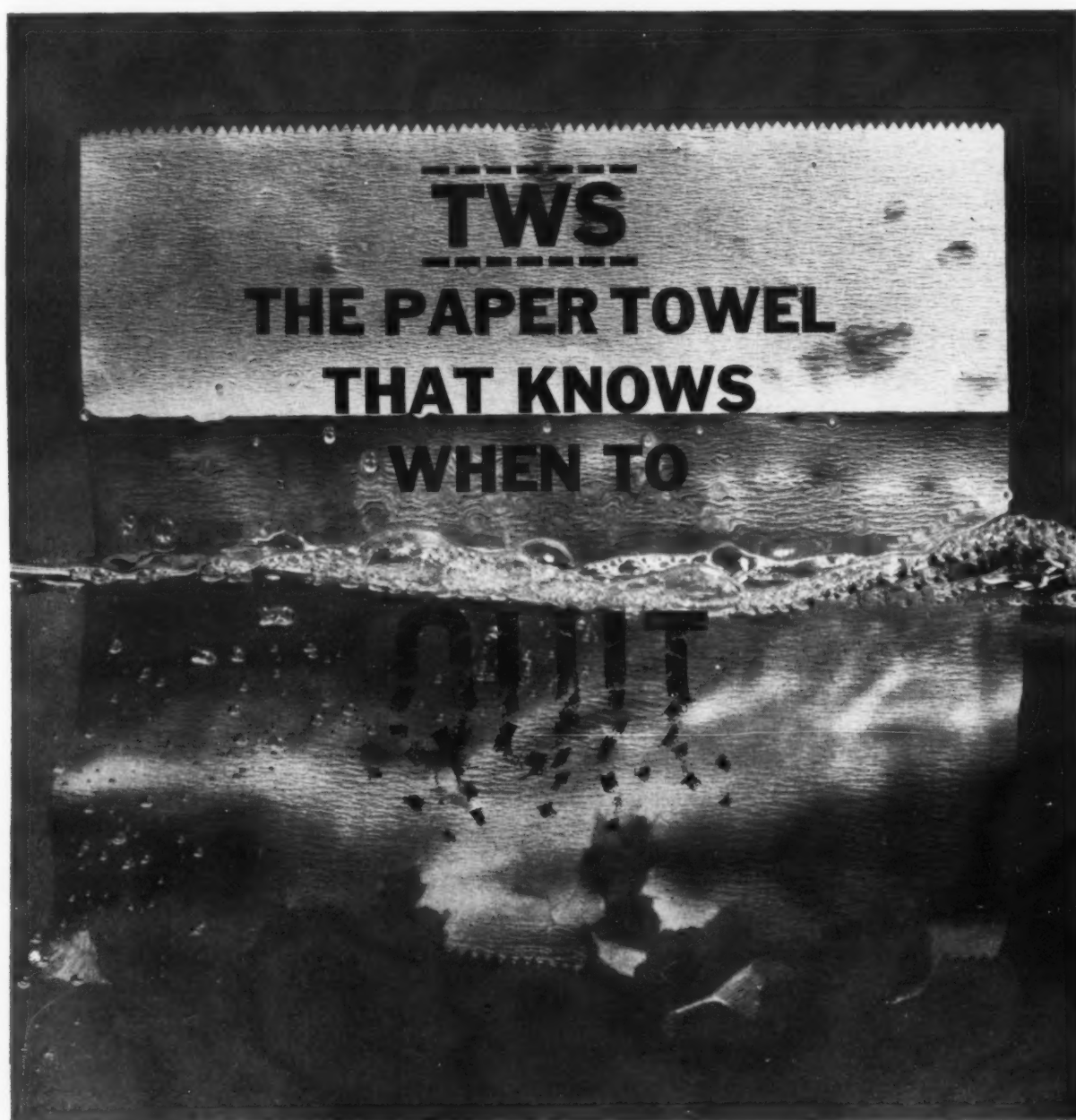
The electrical industry is the third most important user, with about 19-million oz. of silver used in 1960 for electrical contacts. Another user of silver is the ceramics industry which uses silver salts in overglaze colors and as a conductor and electrode material.

The growth of vending machines also has had an effect on the silver supply. It has boosted the need for silver coins (coinage now takes 31% of consumption—up 13% from 1959), thereby cutting the amount of silver available for industrial usage.

Circo Adds New Line

Clark, N.J.—Circo Corp., recently acquired by Branson Instruments, Inc., has added a new line of commercial cleaning compounds to its ultrasonic cleaners, vapor solvents and rust preventives.

The new products include sealing materials and cleaners for power spray washing machines; rust removers, solvents and cleaners for power agitation cleaners; and phosphatings, solvents, paint strippers and cleaning compounds for tank cleaners.



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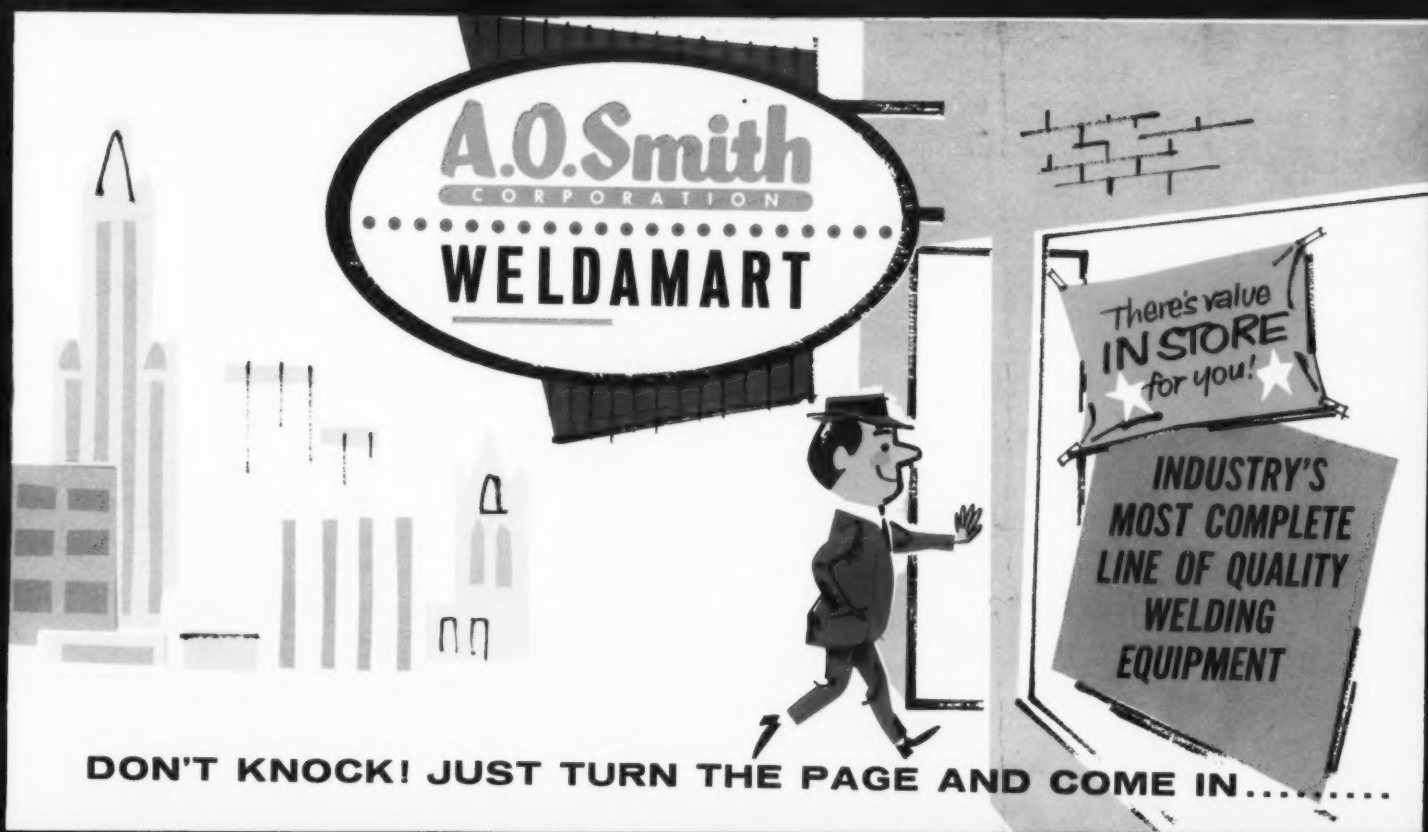
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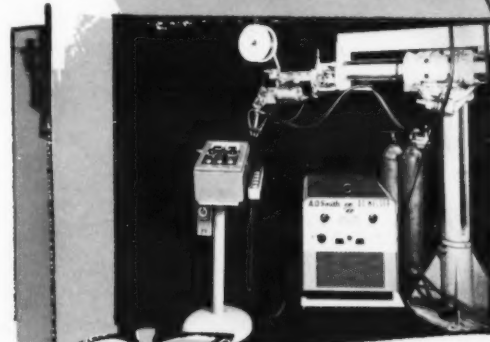
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In our tour through the A. O. Smith Weldamart, we have shown you only the high points in the A. O. Smith line. There are hundreds of variations on the equipment shown here. For specific information, write us direct or visit your A. O. Smith welding distributor.



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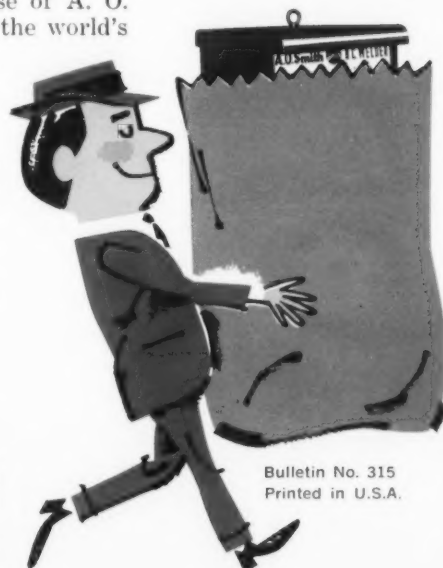
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Purchasing Week's Professional Perspective



CONSULTANT ROBERT C. KELLEY

Former Director of Purchases, Dresser Industries

Discusses This P/W Headline:

**Magnesium Industry
Hits Faulty Specifications** (10/23/61)

Although the magnesium industry is just one segment of the nonferrous metals group, the problem raised in this story looms large in all industry, both hard and soft goods alike. Standard specifications from nationally recognized groups like

American Society for Testing Materials, Society of Automotive Engineers, American Petroleum Institute, and the like have done an excellent job of keeping costs down and quality up. But by their very nature, they often lack specifics for a particular buyer's requirements, and that's where the trouble starts.

Most manufacturing concerns and utilities, as well as governmental agencies, have built up a set of their own specifications for important times. This is good but these safeguards are needed:

- Consult with vendors and have your specs accepted and approved by at least three sources.

- Review your specs periodically—at least annually—and keep them up to date.

- If required, work out an agreement as to method and type of inspection.

Most manufacturers shy away from specifications which give a detailed description of the material and method of manufacture. Many purchasing agents go along with the objection because they feel it places too much responsibility upon the buyer. This

system also may lose the benefit of any advanced methods of production developed by the manufacturer.

Other buyers, however, who do not have the facilities to prepare adequate specifications, rely on the implied warranty of the Uniform Sales Act which says: "Where the buyer expressly, or by implication, makes known to the seller the particular purpose for which the goods are required, and it appears that the buyer relies on the seller's skill or judgment, there is an implied warranty that the goods shall be reasonably fit for such purpose."

An example will show how this works. In the 1920's a famous law suit occurred which had wide repercussions in the trade. A rubber heel manufacturer bought from a nationally known chemical manufacturer a new type of softener or plasticizer for mixing in a rubber compound. The purchase order simply stated so many drums of Type 426 resin (the manufacturer's number). The rubber firm made up a large order of black rubber heels using this material and sold them to a leather shoe manufacturer. The shoe company in turn used the rubber heels in a large order of shoes for a mail order house.

When the cartons were opened several months later the black heels had turned green and the mail order house shipped them all back to the manufacturer. Both the shoe manufacturer and the rubber company sued the chemical firm for damages and collected not only for the value of the material, but for the finished product which had become unsaleable.

The basis for this decision was that the chemical supplier knew the purpose for which his product was to be used and there was an implied warranty that the material was fit for that purpose.

After this case, every chemical manufacturer added a clause in its sales contract, which said that it was not responsible for results from use of the material and its liability was limited to the value of the material.

Other purchasing agents have been known to put an obsolete specification for material on their purchase order, which is ignored or overlooked by the vendor. In one case, a Midwestern company used a spec for bronze which was 40 years old and out-of-date. It was a while before the P.A. finally got the spec changed to one which would correspond to the material he had been receiving all along.

Steel specifications present many problems. Some of them specify chemistry, others physical strength, and others a combination of the two. On oil tubular goods, API specs simply give the yield and tensile strength. Steel mills that make this product do not give out the chemistry, as some may use .38 carbon steel, while others use steels with lower carbon and get the strength by heat treating and normalizing.

A buyer of carbon steel plates can buy in two ways, using ASTM A-7 which specifies a yield strength of 33,000 lb., a tensile strength of 60,000 to 72,000 psi. for plates under 1½ in. thick. Or he can purchase on carbon content such as C-1010, meaning carbon content of .10 points. But he has to be careful here, as carbon steels with a range of .12 to .33 carry no extra

(Continued on page 34)



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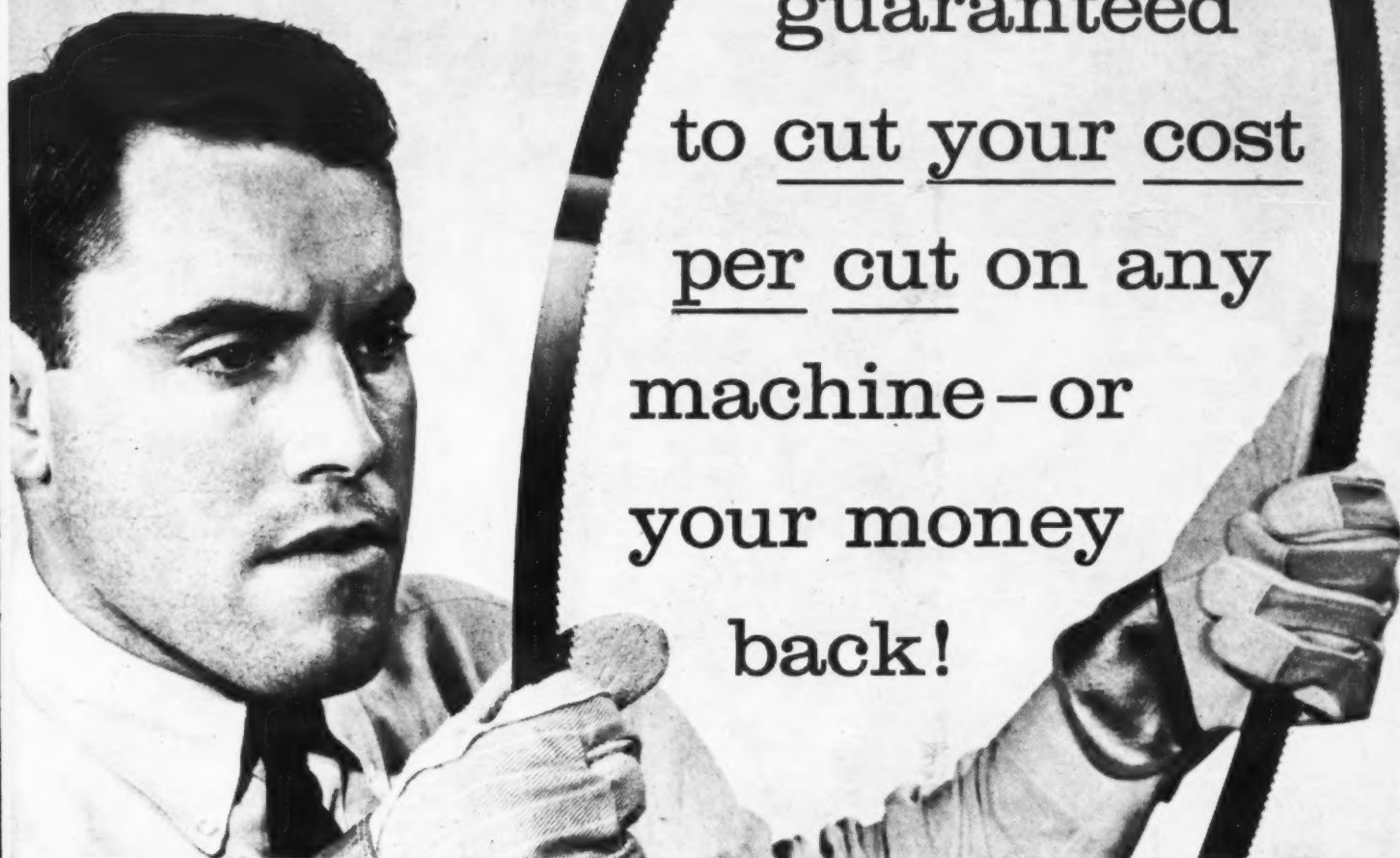
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H. S. SMITH JAMES R. BIRRELL

Homer S. Smith, purchasing agent, has been advanced to director of purchasing, **Fulton Industries, Inc.**, Atlanta, Ga. He is chairman of the business sur-

veys committee, Purchasing Agents Association of Georgia.

James R. Birrell was appointed director of purchasing and traffic, **Public Service Company of Colorado**, Denver, replacing the late Roy T. Blanchard. He had been assistant purchasing agent since 1959.

Paul R. Rinier, purchasing agent, has become manager of cost accounting, **Overlay Mfg. Co.**, Greensburg, Pa. He is succeeded by E. C. Ellison, who has

served the company in various production capacities and who was most recently on special assignment at the company's St. Louis plant.



P. R. RINIER E. C. ELLISON

Joseph J. Leydon, former pur-

chasing agent, **Stamford Hospital**, has been appointed purchasing agent, **Grace-New Haven Community Hospital**, New Haven, Conn. He is a member of the National Association of Purchasing Agents, treasurer of the Southern Connecticut Purchasing Association, and was the first president of the Connecticut Hospital Purchasing Agents Association.

Frederick P. Murphy, material planner, has been promoted to purchasing agent, **Pratt Read & Co., Inc.**, Ivoryton, Conn. He is a member of the Purchasing Agents Association of Connecticut.

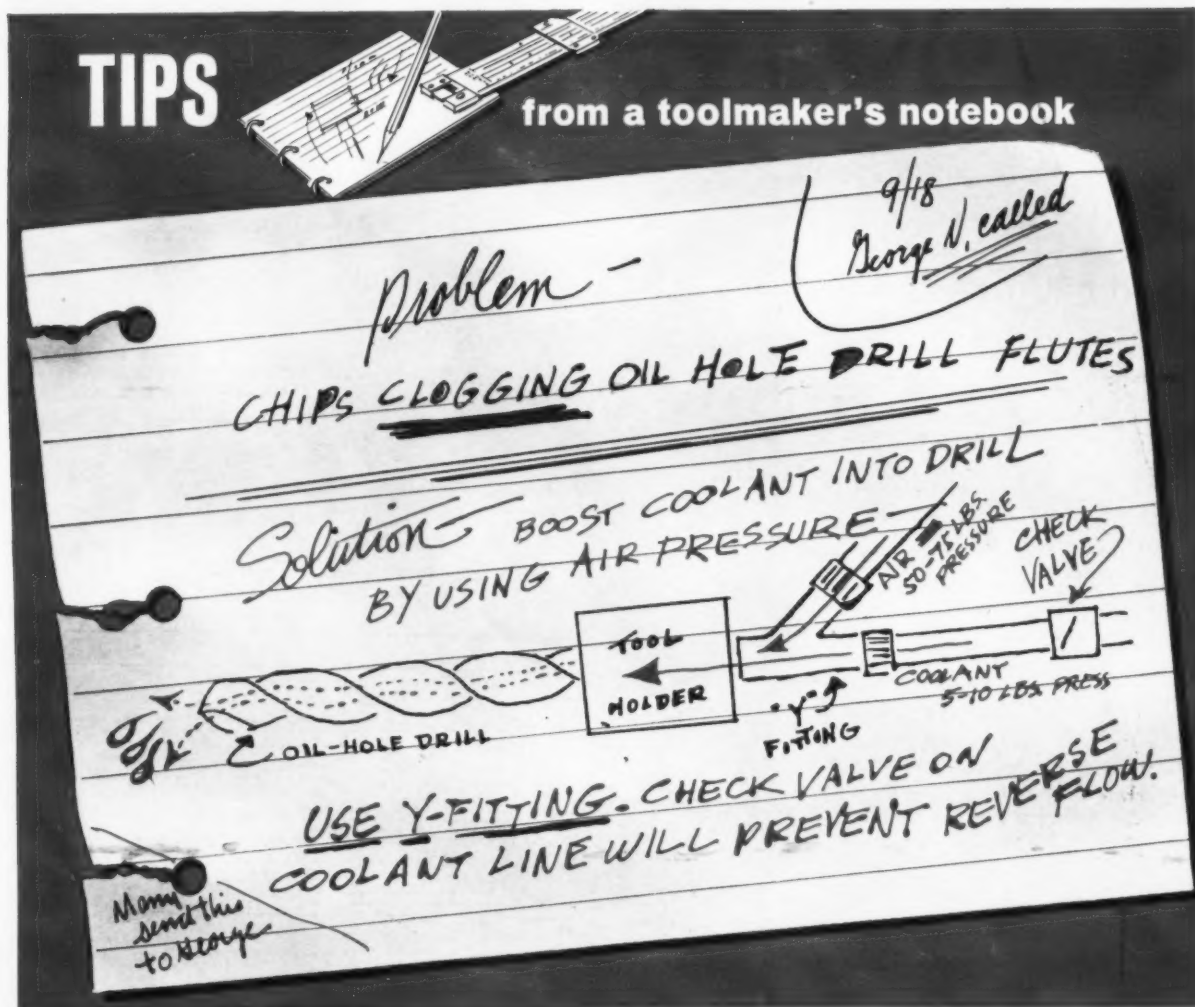
J. T. Faubion, manager of planning and distribution, **Texas Div., Dow Chemical Co.**, Freeport, Tex., has been given the added responsibility for purchasing for the division.

James W. Geiger was promoted from senior scientist at the Research Center to assistant to the director of purchasing, **Philip Morris Inc.**, Richmond, Va.



J. W. GEIGER L. S. TRUNICK

Millard J. Jones, purchasing agent, has retired after 50 yrs. of service with **Homestead Valve Mfg. Co.**, Coraopolis, Pa. Lawrence S. Trunick, associate purchasing agent, will take his place as purchasing agent.



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CHICAGO 10

Professional Perspective

(Continued from page 32)

charge, and .11 and under will cost him .1¢/lb. more.

Another tricky aspect of steel buying is restricted hardenability as tested by the Jominy range. Standard H alloy steels have a hardenability range of 10 points, but for many uses engineers like to specify a closer range. The mills make an extra charge for this. One buyer, however, got around it by buying standard material and adding a clause to his purchase order, "Aim at 35-40 Jominy."

The vendor agreed, but requested that the clause be omitted from the order. He told the buyer verbally that he knew what was wanted and would pick heats to meet the requirement.

From the above we learn that you cannot write a good specification without knowing the price structure of the material. Sometimes a slight variation in tolerances, chemical content, or appearance may provide a significant cost saving. That is why communications between the engineer, the purchasing agent, and the vendor must be kept alive at all times.

Buying to specification, even though you may have a good one in conformity with the best practice, is not a guarantee that you will be free from quality troubles. By all means have good, up-to-date specifications. But reinforce them with a thorough knowledge of your vendors, keeping your communications open with engineering, and knowing your own products.

Inspection is a safeguard to determine if the material bought meets the requirements. Many times the inspectors assigned to check certain contracts are not too well informed about them.

However, much of the grief from rejects can be avoided by sampling materials at the source before they are shipped, such as certified analyses or samples shipped to the buyer for testing before shipping. A high rejection rate is a danger signal which should mean prompt action by engineering, manufacturing, and purchasing to make corrections of troubles.

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FEDERATED SOLDERS

Tapping the Distributors

Hanna Engineering

Chicago—Hanna Engineering Works has appointed four new distributors for sale and service of its hydraulic and pneumatic cylinders, valves and positioners. The distributors are H. E. Linney Co., Oakland, Calif.; Teglen Engineering Co., Inc., South Pasadena, Calif.; Gordon Equipment Co., Fresno, Calif.; and Tri-State Industrial Supply Co., Inc., El Paso, Texas.

IDL

Northampton, Mass. — Kollmorgen Corp.'s subsidiary IDL, Attleboro, Mass., has appointed N. R. Brown Associates, Dallas and St. Louis, as representatives for its defense products. N. R. Brown also handles the torque motor lines of Inland Motors, another subsidiary of Kollmorgen Corp. They will serve Kansas, Missouri, Oklahoma, Arkansas, Texas, and Louisiana.

Tele-Norm

New York — Tele-Norm Corp.'s Postalia Div. has assigned exclusive distribution rights in the eastern U. S. to Cutler Mail Chute Co., a subsidiary of Federal Equipment Co., New York, for its new postage meter.

Edwin L. Wiegand

Pittsburgh, Pa.—Edwin L. Wiegand Co., has appointed Ross & Pethtel, Inc., Baton Rouge, La., as sales engineering representatives for the Wiegand line of Chromalox electric heating equipment. Ross & Pethtel will serve Mississippi, most of Louisiana and southern Arkansas.

Olin Mathieson

New York—Olin Mathieson Chemical Corp. has appointed Structural Steel & Forge Co., a division of Eimco Corp., Salt Lake City, as a distributor for its Olin aluminum mill products. Structural Steel & Forge has four aluminum and steel service centers serving the Rocky Mountain area.

John J. Nesbitt

Philadelphia—John J. Nesbitt, Inc., manufacturer of heating, ventilating and air conditioning equipment, has appointed Rex W. Williams & Sons, Salt Lake City, the Roberts Co., Kansas City, Kan., and Fess-Sieve & Co., Shreveport, La., to handle its product line. Each company will represent the Philadelphia firm in its state.

Florida Plastics

Palmetto, Fla.—Florida Plastics, Inc., manufacturer of molded plastic letters and numbers, has appointed Commercial Plastics & Supply Corp., New York, as its East Coast distributor.

Corning Electronic

Denver—A. I. Williams Co. has been named manufacturer's representative in the Rocky Mountain area for Corning Elec-

tronic Components, a department of Corning Glass Works, Bradford, Pa. A. I. Williams also has offices in Salt Lake City, Albuquerque and Phoenix.

Triad Transformers

Venice, Calif.—Triad Transformer Corp., a division of Litton Industries, has appointed Lynch Electronics, Inc., Monrovia, Calif., as a distributor for its Triad line of precision transformers. Lynch will serve the southern California area.

Butler

Kansas City, Mo.—Butler Mfg. Co., has formed a subsidiary company, Construcciones Metalicas Butler S.A. de C.V., Mexico City, to serve the Mexican market. The subsidiary will set up distributor and dealer organizations throughout Mexico, offer engineering and design services, and manufacture and sell Butler products.

The new firm will use Mexican material and labor in its operations.

GO-ANYWHERE VEHICLE: New Vehicle, designated the Polar 500, has the power and traction to conquer the roughest terrain. Produced by the Polar Mfg. Co., Thief River Falls, Minn., the Polar 500 has a 9½ hp engine which drives an endless rubber track. It can be fitted with front wheels, skis, or a wheel-ski combination to go through snow or soft ground. The vehicle is designed for utility crews, road builders, conservation men, and other rugged operations.



Purchasing Week's San Francisco Perspective



A Lesson in Bridge for P.A.s

By Donald Winston

P/W Correspondent

Structural additions to the San Francisco-Oakland Bay Bridge tell a story of deep-seated changes in the American steel industry.

On the Bay Bridge, work crews are busily adding traffic lanes to the lower deck of the eight-mile, two-stage crossing, so that

by 1963 each deck will be able to carry five lanes of one-way vehicular traffic.

U.S. Steel is supplying 350 twelve-inch alloy steel plates, 42 feet long, which are being bolted to the lower flange of existing floor beams. Therein lies a lesson to purchasing agents.

What is interesting about the project is that little more than half the tonnage of steel is being used than would have been necessary two decades ago. Plate has minimum yield strength of 100,000 lb./sq. in., and tensile strength of 115,000 to 135,000 lb./in.—nearly twice the strength of the best similar-gage 12-in. plate available when the bridge was constructed in the 1930's.

According to J. D. McCall, president of U.S. Steel Columbia-Geneva Div., this type of product improvement, extending through the entire steel industry, has resulted from a "pinch" brought about by heavy taxation and ever-increasing labor costs.

McCall told the California Industrial Development Conference that the answer is to sell less steel and more steel service. "The steel we make we must tailor to a function," he said. In the con-

struction fields, this approach has led steelmakers to develop entire families of structural members, to be used as required in varying stress situations.

Like most modern technological advances, those in the steel industry tend to make the life of the purchasing agent far more complex than it used to be. But they can, on the other hand, give him far more operating leeway than he ever knew before—provided he keeps himself informed.

The picture in structurals is repeated in other aspects of steel. According to McCall, steel purchasers can look for the following innovations now or in the very near future:

- **A woven wire steering wheel** which collapses on impact. Detroit is interested, and so are manufacturers of factory and warehouse equipment.

- **Cloth woven from steel.** Steel parachute cloths, designed as drogues for space vehicles re-entering the atmosphere, might have such prosaic applications as seat covers lasting far beyond the lifespan of the sitter.

- **Steel tanks for cryogenic storage of gas.** Gas, cooled and liquefied with volume reduction of more than 600 to 1, can be stored indefinitely in a tank made of a 9% nickel-steel alloy.

- **A covered stainless steel hopper.** A car recently tested by Southern Pacific Railroad carried cement, silica sand, blended malt, soda ash, sodium tripolyphosphate, granulated sugar, alfalfa pellets, petroleum coke, and rice—all in a four-month period. Car was cleaned by hosing down and drying between loads. Car surface is so slick it reportedly unloads coal in one-fourth the time required by conventional-type car—or in 28 sec. vs. 2 min.

Innovations such as these make comparison with past performance an unreliable indicator of steel activity. "Statistics lose their meaning," McCall said. "No longer can the tonnages of yesterday be placed side by side with the tonnages of today, for we have steel undreamed of only a few years ago, and a pound of finished metal today often does the work of two."

• • •

A warning that industrial wolves are gathering at California's doorway was sounded at the recent Fifth Annual California Industrial Development Conference. In fact, a substantial portion of the program, including the keynote address by Sen. Thomas H. Kuchel (R-Calif.), was given over to serious admonition.

Local governments were cautioned not to get smug about their frequently enviable industrial positions. Californians as a whole were warned that their huge share of the defense budget is fast becoming a fat target for contract-hungry industrial development groups in other regions of the country. The East, the Midwest, and the "New South" were all mentioned specifically by various speakers.

Sen. Kuchel told his audience that the West Coast's eminence in defense industries has evolved as a result of normal, competitive business factors. But he warned that "a few Midwestern and Eastern senators will undoubtedly try to hamstring the Defense Dept.'s responsibility to procure the best and strongest weapons for America's defense at the lowest possible cost."

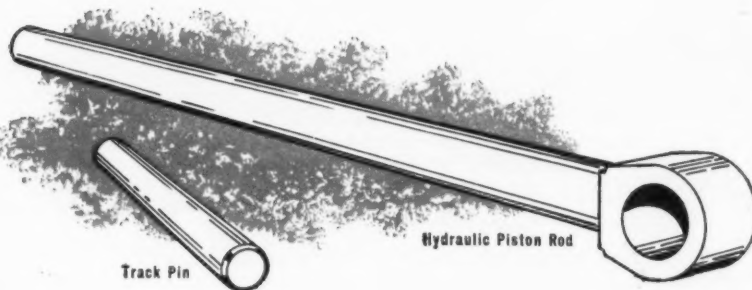
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The chrome plated hydraulic piston rods may be produced from Turned, Ground and Polished C-1144 Strain-Tempered, C-1045 Lusterized, carbon restored, induction hardened, or alloy grades. The track pins illustrate another type of analysis—C-1050 Lusterized, which may be carbon restored and induction hardened. Bliss & Laughlin can always furnish the most suitable steel for your field service and machining requirements.

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GENERAL OFFICES: Harvey, Ill. MILLS: Harvey, Ill., Detroit, Cleveland, Buffalo, Mansfield, Mass., Los Angeles, Seattle



INDUSTRY WHITE ROOM: Employees at the new plant of Syntron Co.'s Semiconductor Div. in Homer City, Pa., test silicon diode assemblies in conditions which ensure maximum quality control. Humidity, air cleanliness and temperature are closely controlled in testing room. In addition, employees wear special dust-proof clothing and enter and leave room through an air lock. The new \$500,000 plant, adjoining Syntron's head office in Homer City, increases the firm's capacity for making silicon power rectifiers by tenfold.

Milwaukee Shifts Expediting Burden to Vendor

Milwaukee—The City of Milwaukee Dept. of Purchases has set out to crack down on tardy suppliers, warn would-be offenders, and, at the same time, remove the expense of follow-up procedures. The city feels that on-time delivery is the vendor's obligation — and the taxpayer shouldn't be obliged to pay for expediting.

First step was a letter enclosed with all city contracts and purchase orders after October 1. The letter, signed by City P.A. Andrew L. Lehrbaumer, states:

"Each contract and purchase order issued by this department shows a delivery commitment, that has been mutually acceptable. Without any expediting by us, we expect that you will make delivery within the specified time and have so considered in our programs.

"Should circumstances arise that will make this impossible, you should contact this department so that the necessary arrangements can then be made. Expediting to effect delivery within the time agreed upon is the

responsibility of the vendor. Therefore, in the event delivery cannot be made as stated, we are to be posted."

Next, to back up this warning, Lehrbaumer began including in bid requests and contracts a clause that makes it clear that if equipment is not delivered within the specified time, the city will rent similar equipment at the vendor's expense. In the case of purchased materials, Lehrbaumer includes clauses which would allow the city to buy similar supplies, wherever available, charging any difference in price to the defaulting supplier.

Double Savings

Getting on-time delivery, to the Milwaukee P. A., is a double saving. Lehrbaumer explains, "When supplies are needed by a governmental unit, most often a crew of workers is assigned to a certain project and all the necessary equipment, tools, and supplies should be on hand when the men report. As all governmental units can readily attest, having a group of workers standing around waiting for material is not conducive to good taxpayer relations and many citizens do not hesitate to call city officials to advise them about the 'bunch of city workers who are resting on their shovels.'"

But besides removing the cause of taxpayer complaints, the precaution eliminates what might prove to be costly delays for the city.

For example, Lehrbaumer points out, if certain equipment is needed for a snow fighting fleet and a snow storm blows in while waiting for the equipment, similar units would have to be rented to get the removal job done. And even if there is no immediate emergency, some newly-ordered equipment might be a key replacement in a carefully planned retirement schedule. If the replacement is late, keeping the older equipment in service longer than intended jacks up maintenance costs.

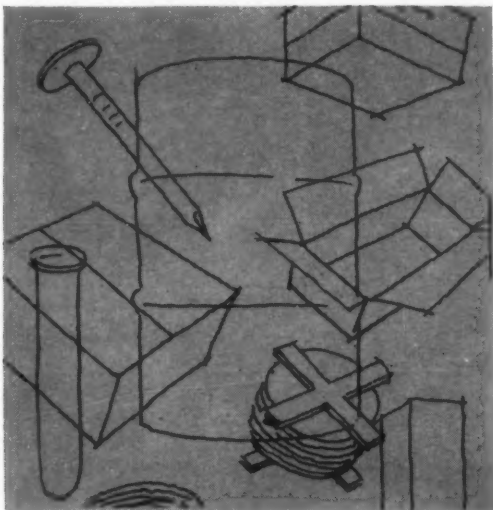
The second saving from insuring on-time deliveries is the time and cost of follow-up and expediting procedures. Says the Milwaukee P. A., "A sizable sum is spent each year by some public purchasing departments in assuring the people, to whom purchasing is responsible, that goods will be on hand when they are needed."

Seller's Obligation

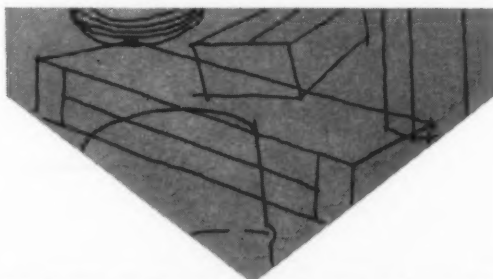
To Lehrbaumer, the responsibility has been on the wrong side. It's the seller who should realize the obligation to make good on deliveries.

"Just as the final act in a purchasing transaction is the testing, inspection and verification that payment is made for intended purchase," he states, "so too it is the final obligation of the vendor, besides sending his invoice, to make every effort to deliver within the required time."

"There is need on the part of the seller or the sales representative, if he is efficient, to follow an order through for the customer and expedite it, if necessary, to insure that the delivery requirement will be met," says Lehrbaumer. "In fact, the delivery time should be a highly respected obligation of the seller."



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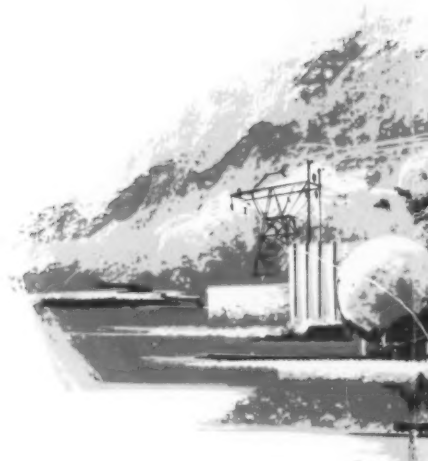
The fabulous family of brass and copper alloys has adjusted so successfully to progress that the "Brass Age" is an endless era that is still with us.

From ancient implements to components in missiles and computers, brass and copper alloys continue to serve industry in a manner that few other metals or materials can match.

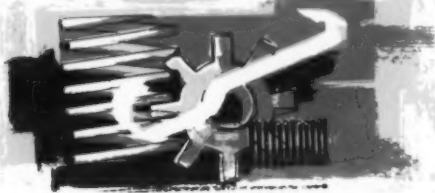
On the following pages are a number of interesting examples of the chameleon versatility of copper-base alloys which prove that "brass" has always been a modern metal— and that the modern metals source which offers you the most in service and technical competence in brass and copper alloys is . . .

BRIDGEPORT BRASS COMPANY

How Bridgeport's modern copper alloys meet the challenges of today's technology



Alloys that are at home in the world's worst corrosive agent . . . It's not aqua regia, hydrofluoric acid or similar potent chemicals, but plain and innocent looking water that takes a fabulous corrosive toll of metals yearly. Copper alloys take to water like a duck, and perform for decades in meters, valves, sprinklers and other water service products. (And even where wetting is unlikely, copper alloys are a guarantee against corrosion by accidental wetting or exposure to moist air.)



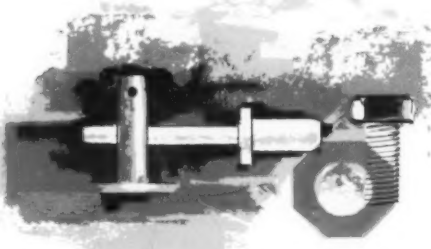
Electrical springs that last a lifetime . . . for electrical switches, relays and other electrical components requiring reliable, "fail-free" springs, Bridgeport offers a range of phosphor bronzes and nickel silvers and the new Nironze 635 copper-nickel-silicon alloy. The latter alloy can be readily cold worked, then heat-treated to the strength of alloy steel. It is equivalent to many beryllium-copper alloys . . . with the added advantage of high electrical conductivity.



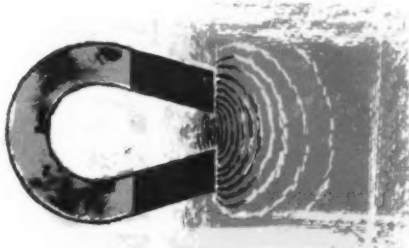
Free-Cutting rod alloys that finish faster and finer . . . The standard for machinability ratings is "free-cutting brass," a leaded brass alloy developed by Bridgeport research. By similar alloying techniques, high machinability has been "built" into a wide range of copper-base alloys with high strength properties and good conductivity.

This brass can be resistance welded . . . Metallurgists have even found a way to modify one of copper's most renowned characteristics—conductivity—so that its alloys can be resistance welded. A little manganese made the difference in brass, which now joins the ranks of resistance-welding copper alloys, along with the

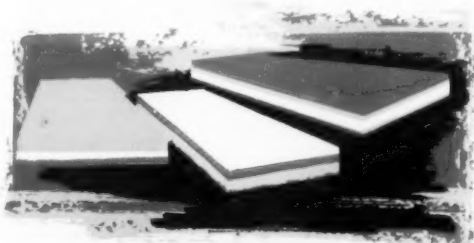
phosphor bronzes, nickel silvers and silicon bronzes.



Cold heading alloys for "wasteless" production of parts by the millions . . . More than 50 Bridgeport alloys are "excellent" in cold working properties. In high speed, automatic machinery, they are easily cold-formed into tough, high strength parts. An important part of the low unit cost is the virtual elimination of metal waste in these cold-heading operations. Alloy quality is essential to smooth trouble-free operation—and Bridgeport alloys are made to do this job well.

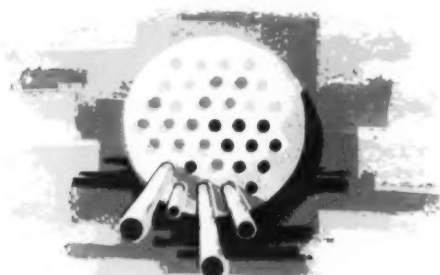


Metals unmoved by even the most attractive magnets . . . In servo-mechanisms, gyroscopes, detection devices and automatic computers magnetic qualities are taboo. Essentially non-magnetic, most copper alloys perform well as structural and conductive components. For critical applications, special alloying produces true non-magnetic properties. In their purest state some copper alloys are actually anti-magnetic.

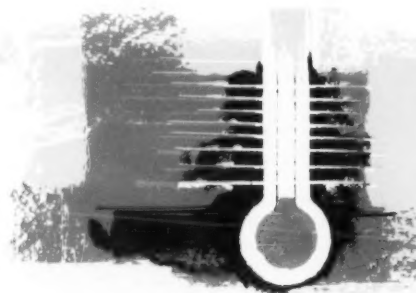


If one alloy won't do try a sandwich of two . . . or more . . . Bridgeport Cladmetals are metal "sandwiches" combining two or more metals with a true metallurgical bond. Usually, the purpose is to combine

surface corrosion protection with base metal strength. But other dual, triple or multiple-metal "sandwiches" provide the right combination of strength, appearance, thermal conductivity, corrosion resistance and cost. Applications range from tube sheets and pressure vessels to cooking utensils. Name your application and Bridgeport can supply the metals and thicknesses to do the job.

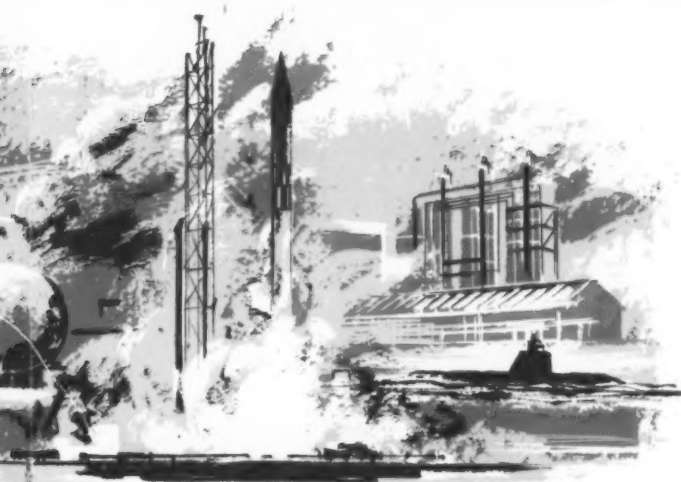


Duplex Tube to conquer "double corrosion" . . . The corrosion resistance of two different copper alloys, or a copper alloy and another metal can be effectively used in condenser and heat exchanger tubes. These dual-wall tubes by Bridgeport resist the corrosive effects of fluids on both the product and cooling sides. They extend the life of the condenser or exchanger and reduce costly downtime.



Alloys that get stronger as temperatures get lower . . . For cryogenic service . . . in the weird world of absolute zero . . . Bridgeport copper-base alloys perform metallurgical miracles. Unlike most metals and non-metallics, they get stronger and remain ductile right down to the bottom of the scale . . . 460 degrees F below zero! For more information on this interesting subject, write for your copy of "Copper and its alloys for low temperature versatility" by C. L. Bulow, Bridgeport's Chief Materials Engineer.

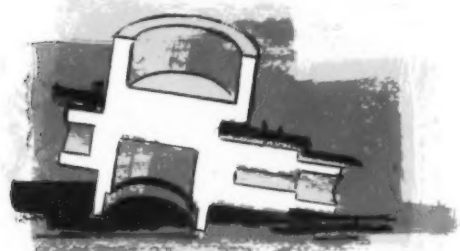
Working alloys that show no fatigue . . . Parts that resist wear, corrosion and fatigue are needed for aircraft forgings, bearing surfaces, bolts, pump and valve parts, wire and cable connectors. A range



of suitable Bridgeport alloys include Duronze aluminum and silicon bronzes, Nironze nickel bronze, and cupro nickels, phosphor bronzes and nickel silvers. Tough performance under rough conditions is a "natural" for these alloys.

How to carry heavy currents down hot paths

... The electrical conductivity of metals tends to decrease rapidly as operating temperatures increase. Conductor cross-section, and consequently weight, most often have to be much greater than for normal temperature service. Not so with Bridgeport's Zirconium-Copper alloy #992, which retains its high conductivity at elevated temperatures. It also offers good resistance to fatigue and rupture stresses. In fact, Bridgeport Alloy #992 has better high temperature characteristics than any other copper base alloy.



"Cored" Forgings with 4-way cavities ...

Here's a way to save on machining. Bridgeport's Forging Division puts the formability of brass and copper to full advantage with its unique cored forging process that produces parts with up to four cored recesses in one plane. Forged parts have "no taper" specifications, close tolerances and smooth hardware finish. Many of these forgings could previously be produced only by the assembly of several cast and machined pieces.

Finally, there's the "Finish". ... What color metal are you looking for—the glowing red of copper, the golden gleam of brass, or the silvery sheen of nickel silver? There's a copper alloy to meet your needs. There are also special colors that can be produced chemically on copper alloys ... black ... blue ... verde antique ... statuary bronze ... and others. Or, if it's a high polish you want, nothing shines like brass. And, if you are planning to plate, copper alloys make an excellent base.

So, whatever the application ... whatever the problem ... there is a Bridgeport copper or brass alloy that will do the job and do it well.

Direct line service makes metal buying easier

Any Bridgeport salesman or deskman may contact any of our technical management or mills at any time to obtain prompt and authoritative response to customer inquiries and problems.

For you, this means better delivery information and service—expert and objective advice on alloy selection of aluminum, brass or copper—or fast action in response to your emergency requirements by our mills, metals centers or research laboratories.

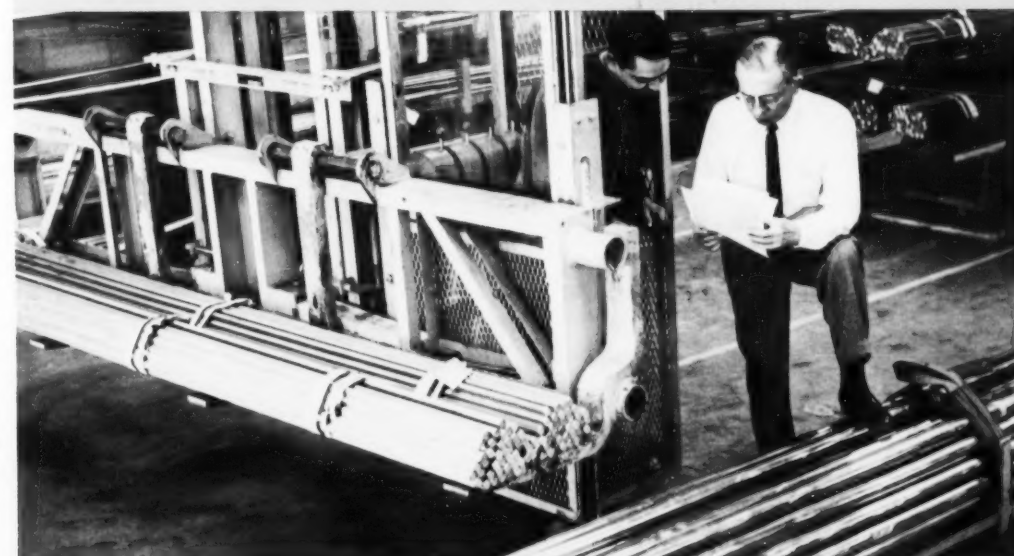
Use Bridgeport's "Direct Line Service" for all your metals needs.



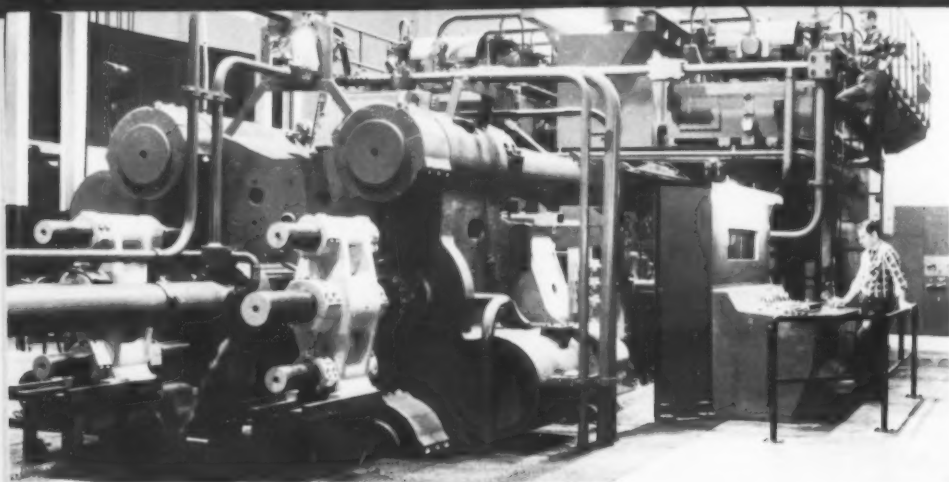
News travels fast on the BBC Network—the Bridgeport Brass Company's teletype system that's an important part of our Direct Line Service. It links 43 mills, metals centers and sales offices for fast service on orders, inquiries and answers to metal problems.



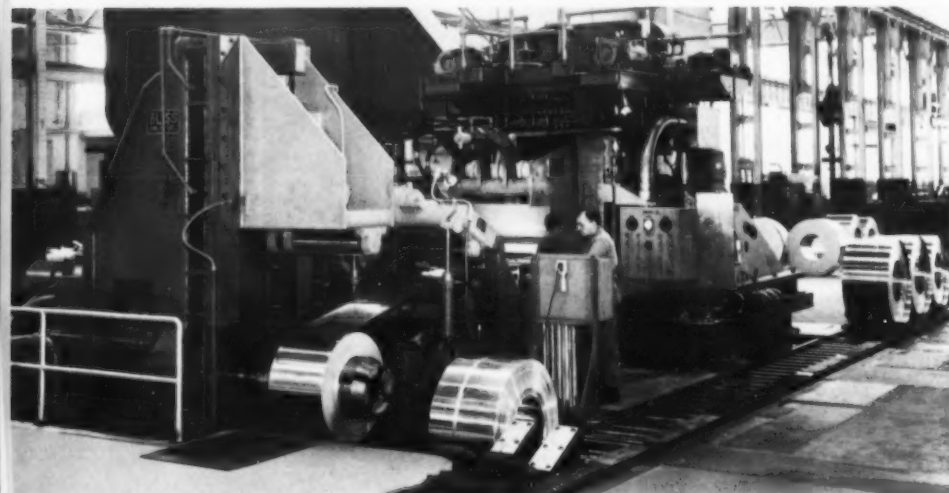
Technical service on metals and metalworking methods is backed up by Bridgeport's modern research laboratories. Here experienced metallurgists develop improved alloys and processing methods. Shown here is the Quantometer which analyzes up to 14 elements in metal alloys in a few minutes.



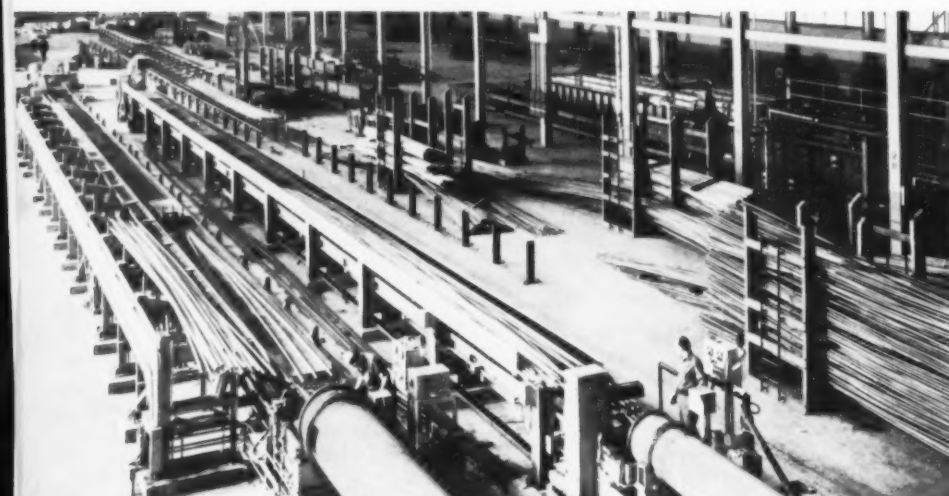
Fast deliveries anywhere in the U.S. are another part of our Direct Line Service. Bridgeport's Metals Centers carry complete stocks of aluminum, brass and copper for quick deliveries to metal users.



Aluminum Extrusion—3500 ton press at Riverside plant hot extrudes aluminum rod and cold forges large parts for missile and ordnance components.



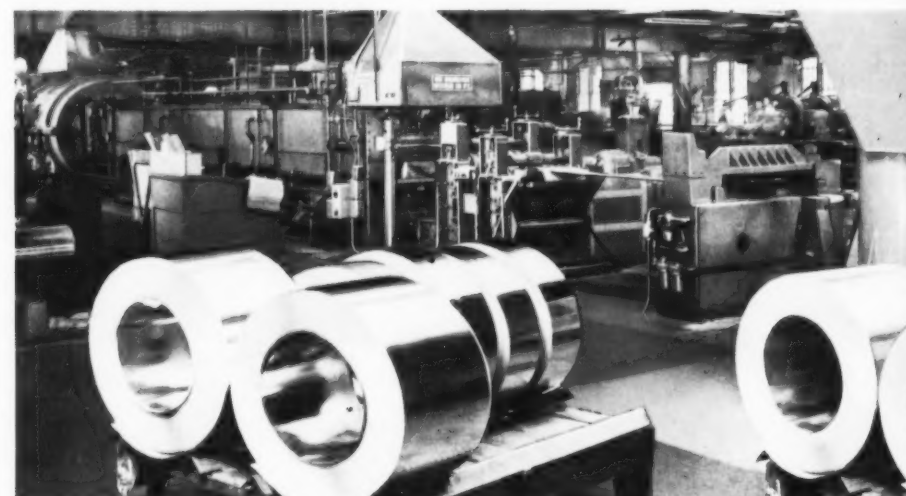
Rolling Aluminum Sheet on a modern, electronically-controlled mill at our Warren plant...part of Bridgeport's expanding production facilities in aluminum.



Drawing Copper Tubes—Five tubes are drawn to size at one time in 125 ft. lengths on high speed benches, typical of Bridgeport's modern mill operation.



Stripping Zirconium Ingot From Mold—Sponge is vacuum melted because titanium and zirconium react violently with oxygen and hydrogen at high temperatures.



Stainless Steel Processing—This atmospheric furnace at Bridgeport's Seymour, Conn. plant anneals stainless strip at high temperatures to produce a bright, smooth finish.

Bridgeport is a metals source...from Aluminum to Zirconium

In Aluminum At Riverside, Calif. and at Warren, Ohio, Bridgeport's modern plants provide a full range of sizes in non-heat-treatable aluminum alloys. Modern processing equipment and laboratory control complete these facilities to insure high production of consistently high quality flat and coiled aluminum sheet and rod. Bridgeport aluminum mill products are stocked in our nationwide network of metals centers for quick local service.

In Brass and Copper Today, Bridgeport can supply 125 "standard" copper alloys in sheet, rod, wire and tube. Dozens of other special alloys have been produced for our customers. Modern brass mills strategically located serve the metal working areas of the country.

In addition to sheet, rod, wire and tube, Bridgeport also supplies copper water tubes, condenser and heat exchanger tubes, duplex tubes, welding rods and copper sheet and strip for building construction.

In Stainless Steel High strength, corrosion-resistant stainless steel strip has recently been added to Bridgeport's line of high quality metals. Available in a number of alloys, Bridgeport Stainless is widely used in the appliance, automotive and other specialty markets.

In Titanium and Zirconium Through its management of Reactive Metals, Inc., Bridgeport is supplying strong, lightweight Titanium sheet and rod for aircraft and missile applications; Zirconium tubes for the nuclear power and

chemical industries; and Hafnium, Uranium, Molybdenum and Tantalum products for special applications.

In Forgings and Cladmetals The forging facilities of Bridgeport are equipped to produce high quality, high strength forgings, from the smallest brass components for electronic applications to aluminum forgings for ordnance components. Our Cored Forgings Division produces complex parts by the unique "cored-forging" process, which can generate as many as four cavities in one plane, with resultant savings in machining.

In Cladmetals Bridgeport can furnish plates and circles in many combinations of metals, metallurgically bonded for a wide range of uses.

BRIDGEPORT BRASS COMPANY

A Division of National Distillers and Chemical Corporation

Bridgeport 2, Connecticut

Sales Offices in Principal Cities • Metals Centers Nationwide



New Plants, Expansions

Altec Consolidates Divisions

Los Angeles—Altec Lansing Corp., a subsidiary of Ling-Temco-Vought, Inc., has completed plans for moving its transformer division, Peerless Electrical Products, to its Anaheim headquarters by the end of the year. Moving of the Peerless division to Anaheim puts Altec's five diversified product divisions under one roof. Altec produces stereophonic and high fidelity sound products for the home, and commercial, industrial and military sound systems.

Opens Plastics Lab

Orange, Tex.—Spencer Chemical Co., Kansas City, Mo., has opened an expanded plastic laboratory at its polyethylene plant here. The laboratory will consolidate the plastics technical program and accelerate the commercial introduction of new plastic resins and will provide for more effective coordination between new product development and field service evaluation. Operations at the company's Orange Works and the Kansas City sales service laboratory, formerly operated separately, are now consolidated in the new laboratory.

Maloney Adds to Plant

Houston—E. H. Maloney Co. has started a \$650,000 expansion program involving the construction of additional facilities and the installation of new equipment. A new structure is being built adjacent to the company's present shipping and warehouse building and will include new facilities for its Plastics and Rubber Div., and its Welding, Painting and Sand-Blasting Divisions. Completion is expected before Jan. 1.

Builds Puerto Rico Mill

Northfield, Ill.—Stapan Chemical Co. will build a \$7-million phthalic anhydride plant in Puerto Rico to be operated by its newly-formed subsidiary, Stapan Caribe, Inc. The new plant is scheduled to go into operation at the end of 1962.

Porter Leases Site

Riverside, N. J.—Riverside Alloy Metal Div., of H. K. Porter Co., Inc., will lease a plant site at a new industrial park in Holyoke, Mass. The lease calls for the erection of new plant facilities to house Prentiss Wire Mills, one of three plants of the Porter Div. The Prentiss plant, currently located in another part of town, produces both ferrous and nonferrous wire. Construction is scheduled for completion in the summer of 1962.

Move Company Offices

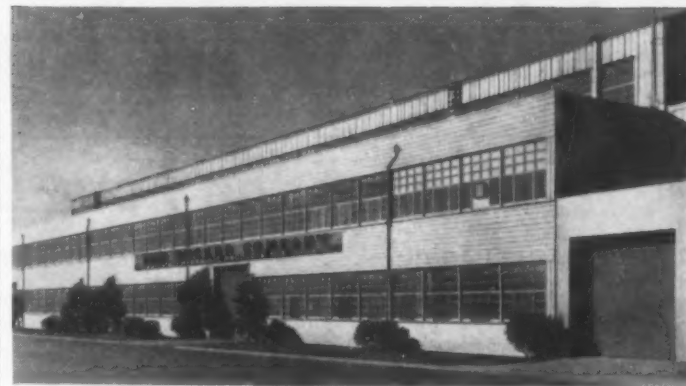
Los Angeles—American Cement Corp. has moved its corporate headquarters here from Philadelphia. Officials of the company said that the growth potential and business climate in the area were key factors in the decision to make the move. The company also has several of its cement, aggregate, and concrete plants located in the Southern California area.

Armco Electroplating Line

Pittsburgh—Armco Steel Corp.'s National Supply Div. has opened a new and faster electroplating line at its Ambridge, Pa., plant, as part of a multi-million dollar expansion program. The company said the electrical metallic tubing now can be electro-galvanized much faster. The equipment also is used in applying a second galvanized coat to rigid steel conduit which previously had been hot-dip galvanized once.

Opens Southern Office

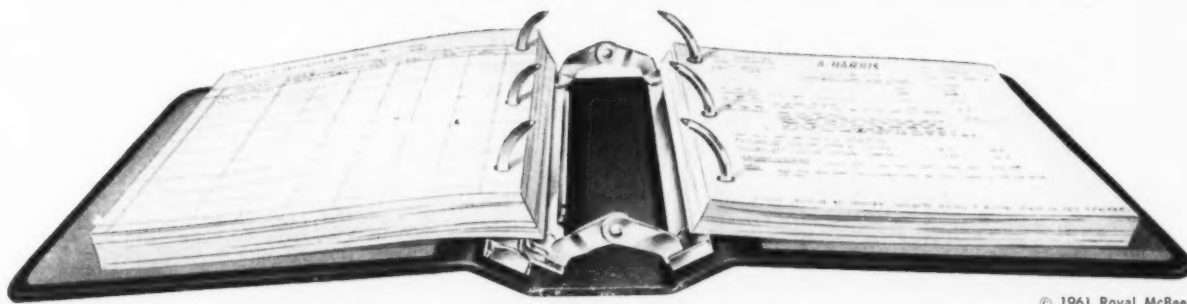
New York—American Can Co. established a southern area headquarters in New Orleans for Canco's division's manufacturing, comptroller, and industrial relations departments, in an effort to promote more effective field management and more efficient distribution of the workload of field operations throughout the Canco division. Canco's sales and credit departments also will move to the New Orleans headquarters.



BUYS BERKELEY PLANT: The Rucker Co. recently purchased this 32,000 sq. ft. plant in Berkeley, Calif., near its home office in Oakland. The firm makes hydraulic systems and test equipment.



TURN A MOUNTAIN INTO A MOLEHILL



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WITH ROYAL McBEE SPLIT-PRONG, "SWING HINGE" BINDERS

Sturdier, speedier, simpler to use. The Royal McBee Split-Prong Binder offers maximum space economy when used for manuals, catalogues, active records, price and route books. This ruggedly constructed and remarkably compact binder opens flat, with complete visibility right to the binding edge. Filing and interfiling are faster and easier. Sheets are "protectively" inserted—so you don't need

ROYAL McBEE CORPORATION

reinforcements. Available in a variety of sizes, capacities and colors—in durable duck or tough, supported vinyl plastic. **Royal McBee Binders—bound to satisfy any housing need.** Choose from the widest variety and largest inventory available. Whether standard-sized or custom-designed, Royal McBee Binders represent the finest materials and workmanship on the market—all fully guaranteed for one year.

ROYAL

SPECIALISTS IN BUSINESS MACHINES

A New P/W Product Guide: Data to Help You

How the Four Duplicating Processes Compare

Spirit

Process sometimes also called hectograph or fluid duplicating. Original is typed or written on heavy paper master backed up with a special aniline-dye carbon. Alcohol solvent dissolves part of carbon, transferring image to copy paper.

Advantages: Master is easy to prepare; several colors can be run at once; machines are relatively simple to operate and service.

Limitations: Copies lack crispness; number of copies per master limited; can't handle halftones.

Master: Available in five colors; prepared by typing or drawing with ordinary pen or pencil. **Price:** 2¢-9¢.

Recommended copy range: 10-400.

Mimeograph

Message or drawing is cut into a coated fibrous-base tissue stencil. Ink goes through the porous openings in stencil to form the image directly on the copy paper.

Advantages: Makes high quality copies; long runs can be obtained with certain stencils.

Limitations: Only runs one color at a time; can't handle halftones (except on electrically prepared stencils); masters relatively difficult to make.

Master: Tissue-base stencil can be cut on typewriter or by hand with aid of a stylus. Electronic stencils are made on special machine. **Price:** 8¢-13¢.

Recommended copy range: 50-5,000.

Relief

Process is also known as Multigraph, trademark of one manufacturer. Prints directly from metal or rubber type placed in slotted drum through an inked ribbon onto copy paper.

Advantages: Gives the impression of an individually typed letter; can perforate or score paper, imprint signatures.

Limitations: Type must be set; cuts made of drawn material needed in body of copy.

Master: Each line of type must be set and placed in proper position in drum. **Price:** Varies with job to be performed.

Recommended copy range: 300-10,000.

Offset

Also sometimes called Multilith, which is trademark of one manufacturer. Essentially a printing process. Ink is transferred from ink roller; to plate master, to rubber roller, to copy paper—hence the name offset.

Advantages: Can handle halftones, line work; makes high quality copies; good for almost unlimited runs.

Limitations: Machines are expensive; equipment more complicated.

Master: Can be paper, metal or plastic; masters can be prepared in typewriter with special ribbon, on most office copying machines, or photographically. **Price:** 5¢-55¢.

Recommended copy range: 100 to 25,000 and up.

COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES/MIN. OF EEC. MODELS	COST	SPECIAL FEATURES
Addo-X, Inc. 300 Park Ave. New York 22, N. Y.	Roneo "250"	mimeo	8½ x 14	Hand	\$210	Auto. inking, self-contained portable, full tone reproduction, permanent eight sheet silk pad.
	Roneo "350"	"	10 x 15	"	318	Same as above, plus 25 sec. color change, precision registration, full ream feed.
	"	"	"	80-120	425	Same as above.
	Roneo "750"	"	10 x 16	Hand	495	Same as above.
Addressograph-Multigraph Corp. 1200 Babbitt Road Cleveland 17, Ohio	80	offset	9¾ x 14	90	1,050	Cabinet stand, auto. blanket cleaner.
	1000	"	"	110	1,745	Same as above, plus 1,000 sheet capacity vacuum feeder, counter.
	1260	"	11 x 17	50-100	2,270	Cabinet stand.
	1260W	"	"	"	2,310	Same as above, with larger image area.
	1250	"	11 x 14	67-125	2,875	Cabinet stand, counter, 5,000 sheet capacity vacuum feeder, double sheet eliminator.
	1250W	"	11 x 17	"	2,970	Same as above.
	1250AF	"	11 x 14	"	3,775	Same as above, plus automated features.
	1250WAF	"	11 x 17	"	3,870	Same as above.
	2550	"	11 x 14	"	5,050	Automated push-button unit, auto. sequence control, cabinet stand, counter, 5,000 sheet capacity vacuum feeder.
	2550W	"	11 x 17	"	5,185	Same as above.
	1278	"	"	"	5,160	Same as model 1250, plus second head to serially number and/or imprint magnetic ink character recognition (MICR) for checks.
	1278W	"	"	"	5,255	Same as above, with larger image area.
	1278AF	"	"	"	6,085	Same as Model 1278, plus automated features.
	1278WAF	"	"	"	6,180	Same as Model 1278W, plus automated features.
	1275	"	"	"	5,400	Same as model 1250, plus reproduces one color on both sides of the sheet, two colors on one side of sheet, or a different color on each side in a single operation.
	1275W	"	"	"	5,590	Same as above, with larger image area.
	1275AF	"	"	"	6,330	Same as model 1275, plus automated features.
	1275WAF	"	"	"	6,520	Same as above, with larger image area.
	2024-1	"	20 x 24	50-100	7,500	Same as model 1250 without cabinet stand, foot pedal operated master clamp, mechanical jogger.
	100	relief	9 x 15	Hand	330	
COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES/MIN. OF EEC. MODELS	COST	SPECIAL FEATURES
Addressograph-Multigraph	250	relief	11 x 16	100	2,560	Auto. feed, extra large paper supply area.
Amer. Office Equip. Co. 24 E. 21st St. New York 10, N. Y.	G Ideal	mimeo	9 x 14	Hand	179.50	Auto. paper centering counter, margin adjustments, twin ink distributing rollers.
	F Ideal	"	"	"	214.50	Same as above, plus semi-auto. cartridge ink feed system.
	E Ideal	"	"	40-140	325	Same as above, plus variable speed control, auto. paper cut-off when machine runs out of paper, equilibrated paper feed.
Amer. Type Founders, Co., Inc. 200 Varick St. New York, N. Y.	1015 Duplicator	offset	10 x 15	120	1,995	Single lever ink and water control, auto. reset counter, variable position delivery jogger, 10 speed controls, interchangeable inking units.
	Chief 15	"	11 x 15	"	3,150 (dute delivery)	Same as above, plus suction feed, also available in chain delivery (\$3,800), exact registration with micrometer adj.
Bankers & Merchants, Inc. 4410 N. Ravenswood Ave. Chicago 40, Ill.	D-1	spirit	8½ x 11	Hand	79.95	Exact registration, positive single sheet feed, patented moistening device.
Bohn Duplicator Co. 444 Park Ave. South New York 16, N. Y.	R-11 H	spirit	9 x 14	Hand	190	Single control knob, auto. master clamp.
	R-11 E	"	"	83	295	Same as above.
	M-4 HAU	mimeo	"	Hand	250	Two-cylinder auto., paste ink, uses ordinary as well as electronic stencils.
	M-4 EAU	"	"	80	345	Same as above.
Copy-Craft, Inc. 105 Chambers St. New York 7, N. Y.	"Piccolo"	spirit	9 x 14	Hand	87.50	Portable, duplicates on papers of all weights, including post cards.
	D-12	"	"	"	119.50	Auto. clamp, built-in pressure control.
	D-17	"	"	"	210	Same as above, plus direct wick moistening device, reset counter, auto. feed and fluid control.
Copyrite Duplicator & Supply Co. 1201 Cortland St. Chicago 14, Ill.	Silver-Streak-1	spirit	9 x 14	Hand	198.50	Reset counter, margin control, wick or roller moistening system.
	Golden Streak-2	"	"	90	299.50	Same as above, plus single lever control for all operations, auto. stop.
Dansen Co., Inc. 101 Cooper Ave. North St. Cloud, Minn.	Dynagraph	mimeo	8½ x 11	Hand	39.50	Auto. feed, semi-auto. inking brush.

Buy Office Duplicating Machines for Your Firm

COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES/MIN. OF ELEC. MODELS	COST	SPECIAL FEATURES	COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES/MIN. OF ELEC. MODELS	COST	SPECIAL FEATURES
Davidson Corp. 29 Ryerson St. Brooklyn 5, N. Y.	Dav-A-Matic-238	offset	11 1/2 x 14	35	1,795	Quick-change plate clamp, hand feed.	A. B. Dick Co.	365	offset	11 x 17	130	5,385	Same as model 360, plus program control unit for auto. operation in high-speed, short-run work systems.
	238-1	"	"	"	2,090	Same as above, plus auto. blanket cleaner.		366	"	"	"	5,385	Same as model 360, also fully automated for high-speed check imprinting.
	238-2	"	"	"	2,685	Hand feed, auto. blanket cleaner, auto. plate changer.	Ditto, Inc. 6800 McCormick Road Chicago 45, Ill.	D-20	spirit	9 x 14	Hand	175	Sure-feed tray, fluid control.
	239	"	"	60	2,160	Auto. suction feeder, quick-change plate clamp.		D-30	"	"	"	249.50	Same as above, plus margin control, "no-pour" fluid system, 3-digit counter.
	239-3	"	"	"	2,275	Auto. suction feeder, auxiliary hand feed board, quick-change plate clamp.		D-31	"	"	110	425	Same as above.
	239-1	"	"	"	2,455	Auto. suction feeder, quick-change plate clamp, auto. blanket cleaner.		D-21	"	9 x 14	"	299	Sure-feed tray, fluid and margin control, counter.
	239-4	"	"	"	2,570	Same as above, plus auxiliary hand feed board.		D-35	"	"	"	575	Seated operation, "no-pour" fluid system, drum registration adjustment, counter, fluid and pressure controls, foot pedal operation.
	239-5	"	"	"	3,165	Auto. suction feeder, auto. blanket cleaner, auxiliary hand feed board, auto. plate changer.		D-60	"	18 x 14	Hand	675	Magnetic blackout drum-margin adjustment, pressure and fluid control, self-stacking two position receiving tray, counter.
A. B. Dick Co. 5700 W. Touhy Ave. Chicago 31, Ill.	210	spirit	9 x 14	"	195	Auto. counter and moistening system, dual corner separators, dual adjustable feed rollers.		14D70	"	14 x 14	110	695	Same as above.
	221	"	11 1/2 x 14	"	295	Same as above, plus feed roll pressure adjustment.		18D-70	"	18 x 14	"	795	Same as above.
	215	"	9 x 14	110	299.50	Single cycle or continuous operation, reset counter, dual corner separators, adjustable roll feed, auto. moistening system.		14D-75	"	14 x 14	120	850	Same as model D-35, plus segmented master clamp for variable masters, magnetic blackout drum.
	226	"	11 1/2 x 15	"	525	Same as above.		18D-75	"	18 x 14	"	1,295	Same as above, plus master guide positioner.
	227	"	"	"	595	Same as above, plus ream feed (500 sheets) capacity.		L-16	offset	12 x 14	75-140	2,095	Keyboard control, self-adjusting blanket drum suction feed, 1/4-in. gripper margin.
	225	"	"	"	650	Sit-down operation, foot pedal controls, single cycle or continuous operation, blackout clamp, auto. counter and moistening system.	DuPrints Inc. 1502 S. Main St. Los Angeles 15, Calif.	25H	spirit	9 x 14	Hand	210	Hairline registration, auto. feed adjustment, reset counter, margin adjustment.
	411	mimeo	9 x 15	Hand	195	Auto. inking, positive single sheet feed, color change, reset counter, 125 sheet capacity.		25E	"	"	120	325	Same as above.
	416	"	"	"	285	Same as above, plus 200 sheet capacity.	General Binding Corp. 1101 Skokie Highway Northbrook, Ill.	319RH	spirit	9 x 17	Hand	259	Portable, margin adjustment works with machine in operation, fluid container mounted on machine.
	412	"	"	100	295	Auto. inking, positive single sheet feed, color change, reset counter.		329RE	"	"	120	395	Same as above.
	418	"	"	85	395	Same as above, plus 200 sheet capacity.	Gestetner Corp. 216 Lake Ave. Yonkers, N. Y.	105	mimeo	10 x 15	Hand	195	Paste ink, dual cylinders.
	434	"	"	50-150	545	Same as above, plus variable speed.		300	"	"	"	320	Same as above, plus auto. inking, full ream positive feed, auto. counter, margin adjustment.
	438	"	"	90-180	735	Heavy duty, 500 sheet feed capacity, auto. inking, positive single sheet feed, auto. shut-off counter, precise registration.		310	"	"	90	425	Same as above with single speed operation.
	455	"	"	115-200	850	Same as above, plus jogging receiving tray.		320	"	"	60 or 120	450	Same as model 300, plus two-speed operation.
	320	offset	11 x 14	110	1,395	Margin adjustments, continuous and single cycle feed control, auto. blanket separation, 1/4-in. gripper margin.		330	"	"	Hand	495	Same as model 300, plus auto. paper jogger.
	350	"	11 x 17	130	2,950	Self-adjusting cylinders, auto. moistening system, 5,000 sheet feed capacity.		360	"	"	30 to 180	750	Same as above, plus variable speed control.
Meyer Corp. 1850 S. Kostner Ave. Chicago 23, Ill.	360	"	"	"	3,550	Same as above, plus 10 1/2 x 16 1/2-in. image area for two-up production.	Marr Duplicator Co., Inc., 53 Park Place New York 7, N. Y.	Style	mimeo	9 x 16	Hand	97.50	Auto. feed and roll release, margin adjustment, adjustable paper stacker, folds up when not in use, handles post cards.
	358	"	"	"	4,370	Same as model 350, plus program control unit for imprinting bank checks with magnetic ink.		G	"	"	"	220	Same plus margin adjustment.
	368	"	"	"	4,775	Same as above, plus 10 1/2 x 16 1/2-in. image area.		B-1	"	"	100	595	Variable speed, auto. controls, handles post cards.
	355	"	"	"	4,960	Same as model 350, plus program control unit for auto. operation in high-speed, short-run work systems.		E	"	"	65-200	950	Positive single sheet feed, non-stop loading.
							Hoyer Corp. 1850 S. Kostner Ave. Chicago 23, Ill.	Conqueror 70	spirit	9 x 15	Hand	214.50	Sheet separator feed, auto. counter, margin adjustment, tension control.
								Conqueror 76A Conqueror 76B	"	"	110	299.50 324.50	Same as above. Same as above, plus 11- and 14-in. cylinder stop selector.

General Electric Makes Eddy-current-coupling Drives

And they're dependable drives. The complete line includes water-cooled and air-cooled eddy-current couplings. We call them ***KINATROL***^{*} drives. Ratings are from 1 to 150 horsepower, operating from standard a-c power.

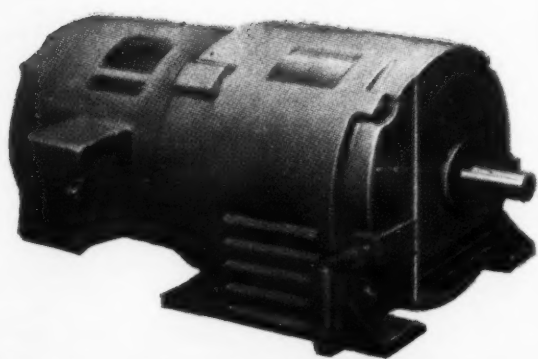
A General Electric ***KINATROL*** drive is not just another eddy-current coupling. For instance, in the water-cooled coupling, water control is packaged. You'll see much less external piping. Furthermore, the coupling is protected from flooding—and the air gaps are dry, preventing corrosion.

KINATROL couplings are compact, field proven and dependable. General Electric has had a good deal of experience in the engineering, manufacturing, and application of packaged adjustable-speed drives. And we know how important service is to a customer.

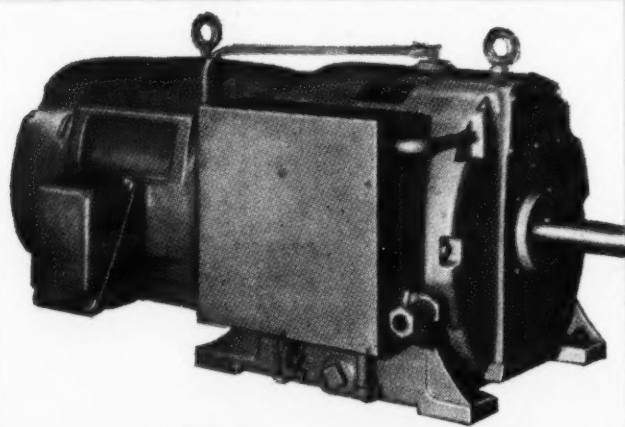
KINATROL —a good product, with the kind of service you can depend on. Please call your nearest General Electric Sales Office for further details.

*Trademark of General Electric Company

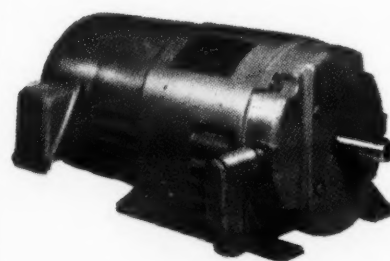
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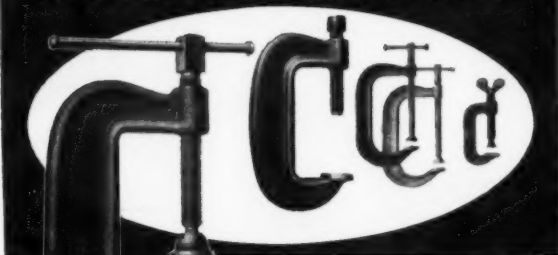
GENERAL  **ELECTRIC**

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Data to Help You Buy Office Duplicating Machines for Your Firm

COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES MIN. OF ELEC. MODELS	COST	SPECIAL FEATURES	COMPANY	MODEL	METHOD	MAX. PAPER SIZE HANDLED (in.)	COPIES MIN. OF ELEC. MODELS	COST	SPECIAL FEATURES
Milo Harding Co. 500 Monterey Pass Road Monterey Park, Calif.	74 Comet	mimeo	9½ x 16	Hand	225	Margin adjustment, paste ink, dual cylinders, counter, handles post cards.	Print-O-Matic, Co.	7-A	mimeo	8½ x 14	60	169.50	Reset counter, accurate registration, also can be manually operated.
	150E	"	"	150	465	Variable speed control, counter, margin adjustment, paste ink, selective inking, full ream feed.	Speedliner Co. 4404 N. Ravenswood Ave. Chicago 40, Ill.	74	spirit	9 x 14	Hand	84.50	Visible fluid container.
	250DA	"	"	60-170	740	Excellent registration, variable speed control, auto. counter, paste ink, full ream feed, auto. interleaver and paper stripper, auto. lint remover and inking.	Speed-O-Matic Co. 7640 W. Norton Ave. Hollywood 46, Calif.	A1	mimeo	4 x 6	Hand	21.95	Auto. feed, pressure adjustment, handles post cards.
	79 Imperial	"	8½ x 14	200	825	Rising feed table, auto. counter, jogging receiving tray, margin adjustment, feeds card stock small as 1- x 3-in.	Speed-O-Print Corp. 1801 W. Larchmont Ave. Chicago 13, Ill.	Liberator 50	mimeo	6 x 9½	Hand	44.50	Auto. feed, accurate registration.
	300DA	"	9½ x 16	175	835	Paper stripper, lint remover, auto. interleaver, auto inking, auto counter, full ream feed, handles post cards.		Liberator 400	"	8½ x 11	"	129	Same as above, plus auto. roller release, margin adjustment.
Multistamp Co. P. O. Box 1249 Norfolk 1, Va.	No. 1	mimeo	3¼ x ¾	Hand	9.50	Stamps on shipping tags, labels, post cards, and directly on cartons and boxes.		Liberator 500	"	8½ x 14	"	199	Same as above.
	No. 1A	"	3¼ x 1¾	"	12.50	Same as above.		Liberator 600	"	"	100	299	Same as above, plus speed control.
	No. 2	"	2 x 4	"	15.50	Same as above.	Standard Duplicating Machines Corp. Everett 49, Mass.	Titan 18	spirit	18 x 14	112	977	Hairline registration, full ream feed tray; auto. counter.
	No. 3	"	5¼ x 3¼	"	19.50	Same as above.		Duplicenter	"	14 x 14	115	1,695	Sit-down operation, conveyor belt receiving tray, hairline registration, magnetic blackout.
	No. 5	"	7¼ x 5¼	"	32.50	Same as above, plus letters.							
Old Town Corp. 750 Pacific St., Brooklyn, N. Y.	No. 7	"	10¼ x 7¼	"	44.50	Same as above.	Vari-Color Duplicator Co.	F-50	spirit	8½ x 14	Hand	99.95	Prints first sheet of paper through without pumping or priming.
	10	spirit	8½ x 14	Hand	204.50	Single operating control, precise registration.		80	mimeo	9 x 14	"	48.52	Margin adjustment, wide open mouthed drum for easy brush inking, manual roller release.
	9H	"	9 x 17	"	295	Positive single sheet feed, spray tube moistening system.		98	"	"	"	87.50	Reset counter, auto. inking and roller release, margin adjustment, closed drum, stripper stackers.
Photostat Corp. 1001 Jefferson Road Rochester 3, N. Y.	9E	"	"	100	495	Same as above, plus "drop-in" master feed.		100	"	"	"	99.50	Same as above.
								200	"	"	60	174.50	Same as above, plus auto. paper feed and cutoff switch.
Print-O-Matic Co., Inc. 724 W. Washington Blvd. Chicago 6, Ill.	1115	offset	11 x 15½	120	3,150	Exact registration with full gripper control throughout printing cycle.	Weber Marking Systems Div. Weber Addressing Mach. Co., Inc. Weber Industrial Park Mt. Prospect, Ill.	10	mimeo	6-in. wide	Hand	295	Imprints shipping labels and tags.
	A2G	mimeo	4 x 6	Hand	19.95	Auto. feed, used for shipping labels, post cards.		50	"	"	"	295	Prints, cuts and counts labels.
	5-A	"	8½ x 14	"	115	Precise paper stripper, accurate registration, auto. feed and roller release.		80	relief	"	105	595	Same as above, plus prints from rubber mat with variable type insets.

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Made from tough, carefully selected steel, specially heat-treated to increase strength and reduce liability of springing. Screws threaded for rapid adjustment . . . thru-hardened for extra life. Swivels designed for permanent retention on screws. Heavy Service in 11 sizes up to 12½" cap. General Service in 9 sizes up to 18" cap. Deep Throat in 7 sizes up to 12" cap. Spatter-Resisting in 7 sizes up to 12" cap. Tool-Makers in 4 sizes up to 4½" cap. Also Machinists' Clamps, 4 sizes up to 4½" cap.

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FOR FASTER SET-UPS

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Standardize on Williams Tool Holders . . . available in a complete range of sizes and patterns for turning, boring, threading, knurling, planing, cutting-off and side work. Correctly designed for fast, easy set-up and rigid, chatter-proof cutting. Drop-forged from tough quality steel . . . heat-treated for added strength . . . machined to close tolerances. Your Williams Distributor can also supply a full line of high speed cobalt and carbide cutters.

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Industry News in Brief

New PPG Department

Pittsburgh—Pittsburgh Plate Glass Co. has opened a new marketing planning department at its headquarters here. The new unit will develop sales and service programs for the firm's products. PPG also opened seven zone sales offices in New York, Pittsburgh, Atlanta, Cincinnati, Chicago, Dallas, and Denver.

Automation Buys Sperry

Torrance, Calif.—Automation Industries, Inc., has acquired from Sperry Products Co., Danbury, Conn., all assets and rights on ultrasonic, X-ray and magnetic product lines. The acquisition will supplement Automation's current operations in the ultrasonics field. Sperry, a division of Howe Sound Co., will be operated as Sperry Products Div. of Automation Industries, Inc.

Lionel-Hathaway Merger

New York—Lionel Corp. has purchased Hathaway Instruments, Inc., Denver, in its third acquisition of this year. Lionel previously purchased Porter Chemical Co., Hagerstown, Md., a toy manufacturer, and Port Chester Mfg. Co., Inc. Lionel said that after the merger its business will be one-third toys and trains, one-third electronics, and one-third "other forms of modern technology," such as hydraulics.

Stylon Buys Hanson

Milford, Mass.—Stylon Corp., manufacturers of ceramic wall and floor tile, plans to acquire Hanson Bros., Inc., Whittier, Calif., a designer and supplier of missile and space equipment. Hanson Bros. will be operated as a wholly owned subsidiary of Stylon.

New Aerosol Supplier

Rochester, Mich.—Rochester Aerosol Corp., a recently formed organization, will begin operation of a custom aerosol packaging plant in January. The new corporation will manufacture aerosol products ranging from insecticides and room deodorants to hair sprays and laundry starches. It will be the first major custom aerosol packager in the Detroit area.

Business Machine Merger

Chicago—A merger of Victor Adding Machine Co. and Comptometer Corp., two business machine manufacturers, to form Victor Comptometer Corp., has been approved by shareholders of both companies. The companies merged in order to produce significant operating efficiency and economy and to increase market penetration and broaden sales territory coverage.

New A-S-H Division

Wynnewood, Pa.—A-S-H Industries, Inc., has formed a new subsidiary, the Allen-Sherman-Hoff Fluid Transport Div. The new division will be engaged in the design and development, sales, and service of hydraulic and pneumatic systems for handling bulk materials with the exception

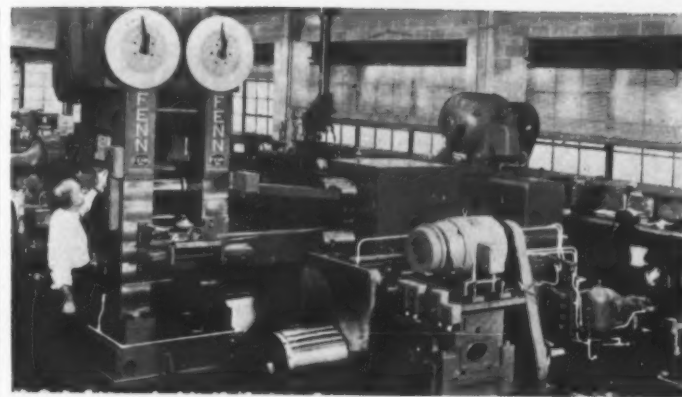
of ash and fly ash, which are manufactured by another company division, Allen-Sherman-Hoff Co.

GM Moves Facilities

Santa Barbara, Calif.—General Motors Corp. has moved four units of its Defense Systems Div. to its \$5.5-million, 105-acre facilities here. The departments are land, sea and aerospace operations and technical specialties. The facilities were formerly occupied by Curtiss-Wright Corp.

Acquires Stamping Firms

Cleveland—Youngstown Steel Door Co., a producer of railroad freight car doors and related components, has purchased three interrelated Elmira, N. Y. companies: Elmira Machine & Specialty Works, Inc., A. W. Serio Tool Co., and Elmira Universal Designers, all manufacturers of precision metal stampings for the appliance and computer industries. The Elmira acquisitions will be operated as separate subsidiaries.



NEW ROLLING MILL: Fenn Mfg. Co. has developed a new mill for rolling nickel chromium steel. Fenn engineers had to design special bearings to withstand the tremendous pressures required to roll the metal.



WHY FORD HUB CAPS ARE STAINLESS STEEL

When contracts were placed for the production of hub caps for 1961 Ford Passenger cars, there were two winners: The Eaton Manufacturing Company and Republic ENDURO Stainless Steel.

The use of stainless resulted in *better hub caps*—stronger, more resilient, with maximum resistance to chemical attack and abrasion. In producing these hub caps, Eaton uses Type 430 anti-roping stainless steel. The material is blanked, stamped, stamped again, roll formed, letter painted, cleaned, and buffed. A major portion of the stainless is supplied by Republic.

CONSISTENT QUALITY: Republic, the nation's largest producer of stainless and alloy steels, offers consistent quality in 45 standard types of stainless steel, and in anti-roping . . . bright annealed . . . precipitation hardenable . . . and vacuum melted stainless steels. Field metallurgists help you select and apply the most economical material capable of meeting your requirements.

For information, quotes, or metallurgical assistance, call your nearest Republic sales office. Or, mail the coupon at right.

The Case of the Short Weight Allowance

How Would You Solve It?

The Contract Covered Damages for Weight Loss, But Made No Allowance for Quality Deterioration

No matter how carefully a sales contract is written, there is always the possibility that honest men will differ about its meaning in specific situations. A New England manufacturer of industrial brooms found this out after negotiating for a large shipment of natural fibers from North Africa.

With an order from several municipalities for street sweeping equipment on hand, the sales contract was specific about quality and weight of the straw. And knowing from experience that shipments don't always contain everything the bills of lading

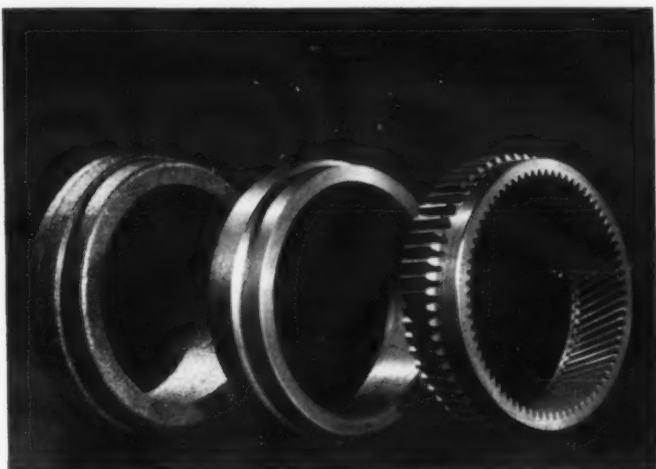
describe, procedures were included for price allowance in case of short weight.

When the boatload of straw was delivered to Boston harbor, the broom manufacturer found that many of the bales had apparently been attacked by rats in the hold of the vessel. The agent for the African seller promptly offered the agreed-upon price allowance, by weight.

Superficially, this seemed fair enough. The trouble was, however, that the rats ate the middle of the straw, not just the ends. That left many bales with fibers of such short length that they couldn't be used for the intended purpose.

"Weight is no measure of our loss," said the buyer. "We need a bigger allowance."

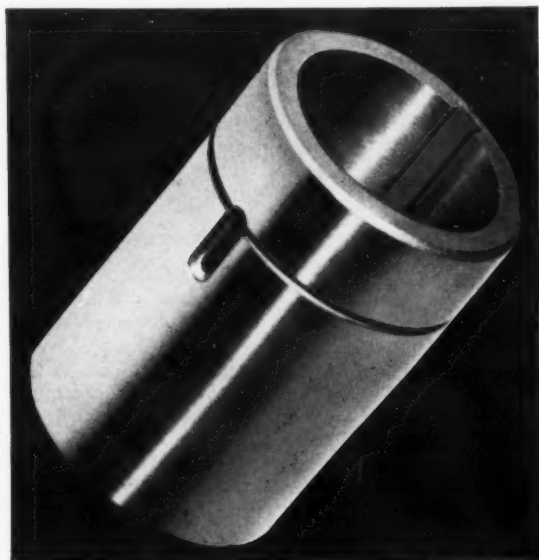
"A contract is a contract," answered the seller. "If you wanted some other way of determining allowances you should have thought of it sooner."



CONSISTENT QUALITY CUTS REJECTS: Republic Type 4047 Hot Rolled Alloy Steel is used in planetary ring gears produced by the Warner Gear Division of Borg Warner Corporation. The alloy is forged, rough machined, broached, hobbled, and heat treated. Production records prove that the uniformity of Republic Alloy Steel has reduced reject rate and scrap loss. Uniform response to heat treatment assures maximum resistance to shock, strain, and wear. Mail coupon below for data on alloy steel.



NEWEST METHODS SAVE YOU MONEY: Republic Formed Parts "Specials"—made to your specifications—can be cold formed, hot formed, extruded, upset, or produced by combinations of these processes. Complete machining, heat treating, and surface finishing equipment available. Republic has produced over 12,000 "Specials" for customers. This one-source operation, with built-in economies and quality controls, can save you time, money, and problems. Call your Republic representative or mail the coupon.



CONCENTRIC TUBE CUTS MACHINING: Eaton Manufacturing Company is using low-cost Republic ELECTRUNITE Mechanical Tubing as the internal drive shaft in their power steering pumps. Tube's concentricity minimizes machining requirements on the ID and OD of this bushing. Use in this hydraulic application also underscores the structural soundness of ELECTRUNITE Mechanical Tubing. Here is premium quality at low cost. Available in carbon or stainless steel. Talk to your Republic salesman or mail the coupon.

Case Histories Available

The American Arbitration Assn. has just published a compilation of arbitration cases that have appeared in PURCHASING WEEK since this monthly feature was begun in June, 1960. A free copy of the pamphlet can be obtained by writing to: American Arbitration Assn., 477 Madison Ave., New York 22, New York.

While the battle raged, warehouse storage charges mounted. Finally, to save time and cut their loss, the parties decided to arbitrate. They hadn't provided for arbitration, but they approached the American Arbitration Assn. with a "submission agreement" in which they stated the issues and agreed to be bound by the findings of three impartial arbitrators.

What's Your Answer?

If you sat as a member of the arbitration panel in this case, how would you adjudicate the issue? Would you decide in favor of the buyer who demanded fuller payment for the damages, or in favor of the supplier who said, "A contract is a contract?"

Make your own decision, then turn to Page 53 and learn how expert arbitrators decided "The Case of the Short Weight Allowance."

Deering Milliken Signs Pact With Swedish Firm For Rights to Tetra Pak

New York—Deering Milliken, Inc., a major textile manufacturer, has signed an agreement with the Swedish firm, Akerlund & Rausing, enabling Deering to enter the packaging field.

The agreement gives Deering exclusive American rights to Tetra Pak products, Akerlund & Rausing's patented line of cellulose and plastic containers, used for packaging milk and other liquids.

Deering's first major project with Tetra Pak will be providing containers for the Federal School Milk Program. The United States is expected to save \$25-million through use of the half pint Tetra Pak containers, which are 40% to 50% cheaper than present methods.



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BUCH ON INVENTORIES: 'I am amazed at how P.A.'s can cut inventories to a minimum here.'

U.S. Purchasing Techniques Impress German P.A.

New York—Purchasing agents can get a good idea of how others see them in the person of Theo. Buch, P.A. for the German chemical company, Farbwerke Hoechst.

Buch (pronounced Boohk) has just completed a two month whirlwind tour of the U.S. visiting suppliers and purchasing agents in New York, Ohio, Illinois, Missouri, California, Texas, Louisiana, Pennsylvania, and New Jersey.

Reason for the trip, his first

to the United States, was to exchange ideas with American purchasing agents and visit Hoechst suppliers in North America. (He learned English at school and from visits to Great Britain.) And from this international exchange Buch is returning to Germany with some big ideas that he hopes to adapt to his own operations.

His most impressive idea is on inventory control. "In America, purchasing feels that stock keeping is part of the vendor's responsibility. I am amazed at

how they can cut inventories down to a minimum here and trust the suppliers to deliver within a short time," he comments.

In Germany, according to Buch, the sales policy of suppliers is to move the goods, whereas the buying policy of the purchaser is to keep large on-hand inventories. There are two reasons for this. First is the generally conservative nature of German industry, which would rather be over-stocked than risk any de-

lay in production, and second is the longer delivery times in receiving materials. It is common, says Buch, for his company to figure six weeks for material that American buyers can get in 14 days.

"U.S. companies tend to build plants near to their raw materials. In Germany, our raw materials are far off, so we do not take chances of running out," he points out.

To help alleviate this problem, Farbwerke Hoechst has recently concluded a contract with one of its American suppliers in which the vendor agrees to keep a day's production needs of one raw material in storage at a Benelux port. But, as Buch admits, German industry is still a long way from refining the technique of vendor-held inventory.

Use of Computers

The second American idea that Buch takes home is purchasing's use of computers. "Companies here have included purchasing in their computer plans from the beginning. I was highly impressed by one purchasing department that regulates its activities in tune with the machine. Now that I have seen what data processing can do, I plan to make an effort to get time on my company's computer," Buch observes.

Finally, the German P.A. is impressed with the long range planning programs in U.S. chemical companies. He particularly noted that a purchasing representative sits in on the product development committee of one company.

"In Germany, purchasing gets a one year sales forecast. We must break it down into raw material requirements by quantity and decide when and how to buy. But, as you can see, we are dependent on the market situation, because we can only plan one year ahead. In America, purchasing departments know product plans up to five years ahead of time. With this knowledge, they can buy at the right time."

Information Problem

Another problem German P.A.'s face that Americans do not, is in the accumulation of information. Unlike his American counterpart, who has numerous sources for getting commodity prices, market trends, upcoming price changes, and the like, the German P.A. has to wangle information out of producers.

"German companies are not as outgoing as American companies. It's not considered good business to let out any information. As we say, everything is 'unter unser hut'—under your hat. I have to get market data by the back door from contacts in various industries," Buch explains.

The only written market information available to P.A.'s is a commodity news letter put out once or twice a month by the German Purchasing Agents Assn. But, of course, this is a limited source.

What he lacks in readily available information, the German purchasing man makes up in painstaking, detailed accumulation of data. Buch's system, which with some variations is now generally accepted as stand-



Without a power strap feeder, one man stands and waits to take the strap and poke it underneath the carton. His partner completes the operation with Signode's electric strapping tool.



With the power strap feeder, only one man is needed to strap big cartons easily. He puts the strap in the feeder throat and steps on a foot pedal. The feeder carries the strap around the carton.

Costs \$12.50/mo.—saves one man

The Signode Power Strap Feeder has paid for itself quickly on all the big-package strapping lines where it has been placed. It is available on a single payment basis or an annual rental of only \$10 to \$20 a month, depending on model—(\$12.50 for the one shown, not including the electric strapping tool). Yet it frees one man for more productive work. It is simple, versatile...can be used with hand tools or power tools. It is one more way Signode can help make your product cost less to handle, store, ship, and receive. Ask a Signode man for the Power Strap Feeder facts, or write:



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ard purchasing procedure in Germany, is to analyze the costs of an intended purchase from scratch.

A Complete Check

For example, if Buch is to conclude a contract for benzene, he starts his analysis by studying the cost of coal mining. He traces his supplier's costs for getting raw materials, producing or processing the product, transporting it, and covering production overhead. Then he adds on a factor for return on investment and comes up with what he believes should be a fair price for the product.

But before going into negotia-

tion with the vendor, Buch balances this "fair" price with what the market is doing. At this point he is ready to bargain with the supplier.

"This is a long way to solve the problem, but when I buy, I am well armed," says Buch. "I can argue with the vendor and prove my price quotation. Of course, a company the size of Farbwerke Hoechst carries considerable weight in setting prices."

This thorough method applies to large contract raw materials purchases, but not to MRO items, or to small value purchases. Also, because the variety is so great, Hoechst does not use this

system for equipment purchases.

To do the kind of buying that German P.A.'s undertake requires a good knowledge of chemical processing. Yet neither Buch, nor anyone else in the Hoechst purchasing department is a chemical engineer. These P.A.'s are economics or business administration graduates.

Training Course

Key to the chemical firm's success at pumping engineering know-how into its purchasing department is an intensive one-to-two-year company sponsored training course. Though not required, all P.A.'s are "encouraged" to take the course. And

none turn it down, as success in the training paves the way to getting ahead in the firm.

Here's how the training program works: The company provides all the laboratories and instructors, including top-flight chemists on the corporate staff as teachers. The course meets twice a week for two or three hours during the working day. This is called the "general background" course designed to give every purchasing man a good knowledge of every chemical process. After assignment to a particular commodity, P.A.'s usually go on to specialize in the chemical technicalities of that material through night courses

that are given outside the company.

There are no examinations in the Hoechst in-house training plan. Buch points out that the final test is how the P.A. practices what he has learned. In other words, performance is what counts.

And, to Buch, the time spent in the course is well worth it. "If you have to talk to technical people in the company and well trained salesmen outside the company, you have to have adequate knowledge of chemistry or else it just doesn't work. Otherwise, you have to believe everything they say," he states.

"In my vision, a professional purchasing agent must be an all around man. He must have good commercial training, know the market, understand his industry.



BUCH ON EDP: 'Now that I have seen what data processing can do, I plan to . . . get time on my company's computer.'

He must have certain legal knowledge too. A purchasing agent must be capable of setting up a contract in detail, even though there is a legal department to help. Especially in Germany, because our civil law is a little different from the U. S., the P.A. must know his legal rights in contracts," Buch adds.

What can the American purchasing man learn from the Germans? Says Buch, the organization of the details of purchasing and the accumulation of data. He also points out that most American buyers are too U.S. minded, while in Germany the emphasis is on the international market. The Hoechst P.A. feels that this international thinking cuts down considerably on the problems of reciprocity and it might have the same effect in the U.S.

Follow-Up: Letters & Comment

Wants Pallet Information Baltimore, Md.

We noticed in a recent issue a very interesting article on bulk palletization in the glass industry (PW, Nov. 6, '61, "Automated Pallet System Developed For Shipping Glass Jars and Bottles," p. 37).

We would like very much to circulate this article in our company and would appreciate spare issue.

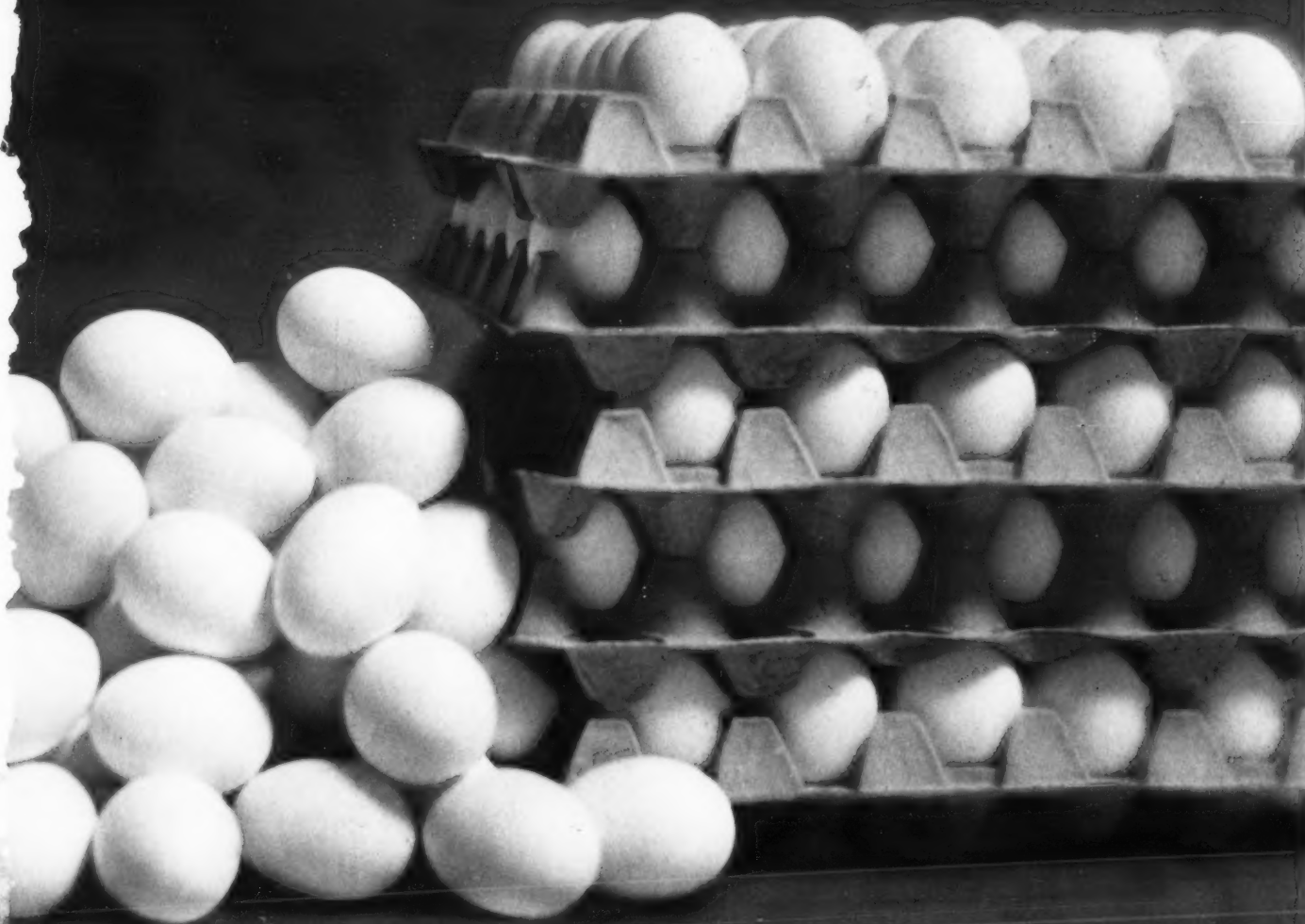
Robert L. Randolph
Vice President
Nelson Co.

To Our Readers

This is your column. Write on any subject you think will interest purchasing executives.

Send your letters to "Follow-Up," Purchasing Week, 330 West 42nd St. New York 36, N.Y.

that's packaging!



Shown: Mapes molded pulp Filler-Flats for bulk egg packaging

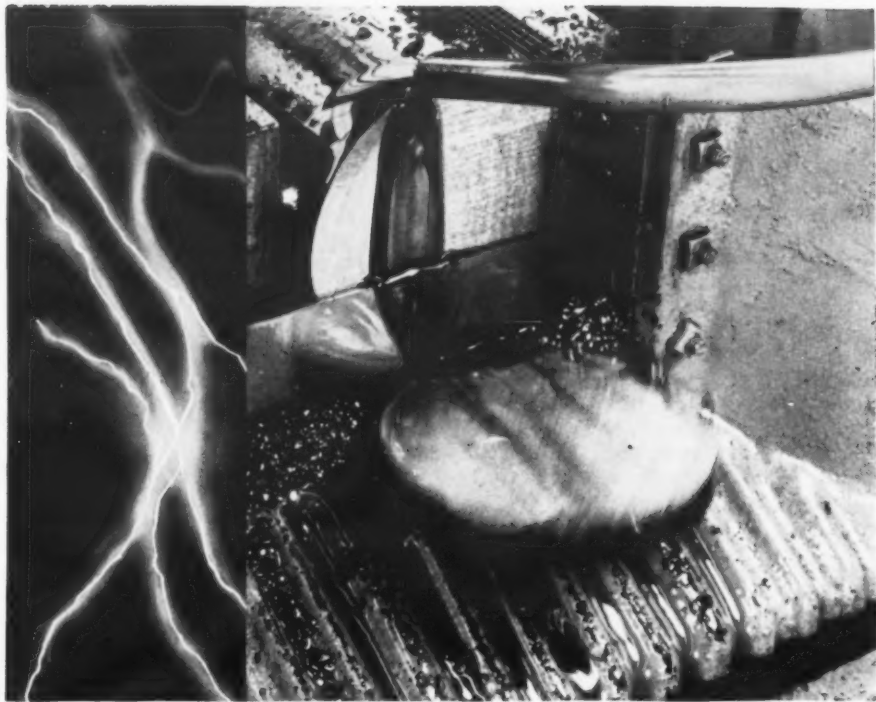
8 billion eggs a year—in bulk cases or retail cartons—go to market in packaging produced by Packaging Corporation of America, a new name in American business with half a century of packaging know-how. A nationwide sales organization—52 strategically located plants.

A completely integrated nationwide organization with 9 mills, 18 paperboard machines, 43 converting plants producing—

CARTONS • CONTAINERS • DISPLAYS • EGG PACKAGING PRODUCTS
MOLDED PULP PRODUCTS • PAPERBOARD • PLASTICS

Packaging

Corporation of America



FAST!

Your hack sawing machines will produce faster cutting-off on all types of work when they are equipped with unbreakable Marvel High-Speed-Edge Hack Saw Blades.

Why? Because these are the blades specifically designed to take the high speeds and heavier feed pressures demanded by today's production schedules.

What's more, your operators know—or will soon learn—they can increase speed and pressure without endangering themselves or the machine, because these are unbreakable Marvel High-Speed-Edge Blades . . . the blades that have set the standard for all other blades to match—if they can.

Ask for Marvel High-Speed-Edge Hack Saw Blades by name and you can be sure you're getting the unbreakable blades designed to give you maximum accuracy and speed in your cutting-off operations. Leading Industrial Distributors have Marvel Blades in stock.

Write for the latest Cutting Tool Bulletin and the name of your nearest Marvel Distributor.

MARVEL Metal Cutting SAWS

BETTER MACHINES
BETTER BLADES

ARMSTRONG-BLUM MANUFACTURING CO. • 5700 Bloomingdale Avenue • Chicago 39, Illinois

Answers to Strategy Games on Pages 16 & 17

Answer to Problem I

Your payoff box should look like this:

		QUALITY		
		RAISES PRICE	DOESN'T RAISE	
FIDGET	RAISES PRICE	+5	-10	-10
	DOESN'T RAISE	+1	0	0*
		5	0*	

Play this game the old way, looking for the one course of action that's best for Fidget. Put the lowest numbers in the horizontal rows at the side, and the largest numbers in the vertical columns at the bottom. The safest course for both parties is to stick with their current price and reciprocity arrangement. This answer is starred.

Answer to Problem II

Your payoff box in the Time Study Game should look like this:

		ADAMS	
		TIMES ROBOT	TIMES AVERAGE MAN
BOYS	SLOW DOWN	-5	+5
	WORK NORMALLY	+10	-6

Now subtract the payoffs and put the result down in reverse order on the outside of the box.

		ADAMS		
		TIMES ROBOT	TIMES AVERAGE MAN	
BOYS	SLOW DOWN	-5	+5	16
	WORK NORMALLY	+10	-6	10
		11	15	

The best strategy mix for the boys in the shop is to slow down 16/26 (or 61.50%) of the times they are rated by Adams, and Adams should time study the fastest worker in 15 of 26 ratings (or 57.8% on Robot).

NEW from NORTON



CUT-N-SAUCE wheels with DIS-CARD mounts

A new combination from Norton's newest plant

For easier, faster weld-grinding, light snagging and many other portable grinding jobs, Norton now offers you:

The only reinforced wheels that combine a saucer shape with a disposable mount.

These are the new BSA Type Cut-N-Saucer wheels with Dis-Card mounts . . . available in 7" and 9" diameters. They are produced in the big new Norton Plant 8, built specifically to improve the manufacture and performance of resinoid wheels.

Reinforced with layers of fibre glass, BSA Cut-N-Saucer wheels gain added advantages from the new shape. Compared with straight wheels, BSA wheels on the job can be held at angles much closer to the horizontal. Results are easier control and reduced operator fatigue.

The Dis-Card mount is equally new and vital. Unlike ordinary mounts it is no separate attachment. It is permanently secured — designed to be bought and thrown away with

every wheel. This means you can change wheels in seconds — completely eliminating "lock washer" action and the usual mounting routine that can take up to half an hour. So every Cut-N-Saucer wheel you buy is already mounted — and stays mounted, throughout wheel life.

Yet you pay no more for a Norton Cut-N-Saucer than for a conventional reinforced wheel!

Cash in on this first opportunity ever offered to you to get advantages never before combined in a single, standard priced, portable grinding wheel. For further facts on the new BSA wheels — or on straight wheels also with Dis-Card mounts — see your Norton Distributor, or write to NORTON COMPANY, General Offices, Worcester 6, Mass. Plants and distributors around the world.



Making better products . . . to make your products better

NORTON PRODUCTS: Abrasives • Grinding Wheels • Machine Tools • Retractors • Non-Slip Floors • BURN MARKING DIVISION: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

Electronics P.A.'s Urged to Ready Their Shops for EDP Mechanization

New York — A purchasing executive told members of the P.A.'s, Inc., that it is only a matter of time until the use of electronic data processing equipment becomes mandatory for the purchasing function.

Speaking at a monthly meeting of the group—purchasing agents of the radio, television and electronics industries — Benjamin Katz, director of purchasing, Polarad Electronics Corp., said the first step toward this is the establishment of a fully standardized part numbering and nomen-

clature system. The second hurdle to be jumped, he added, is the education of personnel to the use of standard numbers and EDP paper work procedures.

Katz reported that it will take the average firm two to five years to set up a completely integrated, smoothly operating system including stock control and receiving. Therefore, he advised P.A.'s to investigate application of EDP to their operations as rapidly as possible.

Polivar Unveils New Line Of Precision Tool Posts

Houston—Polivar Mfg. Co. has developed a new line of high precision self-indexing turret tool posts. It guarantees the tools in writing to an accuracy of 75 millionths of an inch.

The company said there is no wear-in period during which the built-in accuracy is adversely affected. The turrets are made in 2½, 3½ and 4 sq. in. sizes, with three types of mountings.

The turrets come equipped for 90 degree indexing, but any number of indexing stations can be added.



DALLAS AWARD: Ray Langford (l), pres., and Bruce Madden (r), scholarship committee chairman, Dallas P.A. Assn., present I. O. Tittle, Southern Methodist University, with group's 1962 scholarship award.

Arbitration Answer

Three arbitrators, accompanied by an AAA tribunal clerk and representatives of the two sides, spent a morning in a hearing room and the afternoon in the warehouse in reaching a decision in "The Case of the Short Weight Allowance" on Page 49. Examining a sample number of bales, they made an estimate of the damage.

The arbitrators decided the buyer was right in principle. The seller had represented his merchandise as suitable for manufacture into industrial brooms. Their examination of a sample number of bales led to an award giving the buyer a considerably greater allowance than he would have had by weight alone.

The buyer, now satisfied, later said this experience taught him two lessons. One was that merchandise should not be judged by weight alone. The other was that contracts ought not to leave an avenue of settlement in doubt. From that point on, he said, his contracts would provide in advance for arbitration if disputes should arise.

The American Arbitration Assn. is a private, nonprofit organization that helps businessmen, management, and labor find peaceful, fair-minded solutions to their quarrels. Many contracts between buyers and vendors contain a "future dispute arbitration clause," directing that any controversy or claim be settled in accordance with AAA rules.

A typical arbitration submission agreement reads: "We, the undersigned parties, hereby agree to submit to arbitration under the Commercial Arbitration Rules of the American Arbitration Association the following controversy: . . . We further agree that the above controversy be submitted to (one) (three) Arbitrators of the American Arbitration Association. We further agree that we will faithfully observe this agreement and the rules and that we will abide by and perform any award rendered pursuant to the Agreement, and that a judgment of the Court having jurisdiction may be entered on the award."

For further information, contact AAA at its main headquarters, 477 Madison Ave., New York 22, N. Y.



GAYLORD researches out the failures

You can't afford to experiment: the wrong kind of shipping container can cost you hours, customers and dollars.

So Gaylord packaging research engineers experiment for you with the complete box, liners, adhesives, interior design—the works. Every Gaylord container that you get is *proven*.

Does your product need a better container? Call your nearby Gaylord Man. Let him and Gaylord Research go to work for you now.



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GAYLORD CONTAINER DIVISION



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HEADQUARTERS, ST. LOUIS
PLANTS COAST TO COAST

Penna. P.A.'s Warned of Inventory Dangers

Kutztown, Pa. — Members of the Purchasing Agents Assn. of Lehigh Valley and the Reading Purchasing Agents Assn. got together for their first annual joint conference on purchasing. Fifty-two purchasing men turned out for the one-day session sponsored by the College of Business Administration, Pennsylvania State University.

P.A.'s were advised that too high an inventory is bad, but too low an inventory is worse. William B. Consley, retired director of purchases, York Corp., York, Pa., pointed out that it's possible to figure the cost when inventory is too high. But, he said, when inventory is too low, it is difficult to figure the cost in lost business, shut-down production lines, and irate customers.

Materials Management

Speaking on "Materials Management—Will It Work?", Consley pinpointed inventory control as one of the most important areas covered by this concept. Materials management, he said, must work because the cost of material that goes into a product is generally more than half the cost of making the product.

Consley told the group that if they checked on how they spent their time, they would probably find that 80% of it is spent purchasing items that total 20% of the value of all items purchased.

Florida Group Plans Annual Buyer-Seller Meeting for January

Jacksonville, Fla.—A six-man panel discussion featuring three purchasing men and three salesmen will highlight the Purchasing Agents' Assn. of Florida's eighth annual buyer-seller conference Jan. 18-20.

The panel, moderated by Frank C. Fish, St. Regis Paper Co., will tackle such mutual problems as back door selling, common errors, and moral responsibilities in the buyer-seller relations. Buyer panelists include: R. P. Raitt, Belcher Oil Co., J. J. Mate, General Electric Pinellas Peninsula plant, and T. F. Torwell, Maxwell House Div. of General Foods.

Dr. Frank T. Adams, Jr., assistant dean of men, University of Florida, will discuss "Communications—a Two-Way Street in Buying and Selling." The advantages and disadvantages of contract buying will be reviewed by R. C. Rex, Martin Co., and S. A. Anderson, Superior Graphite Co. will cover small order problems.

Following a general meeting on Saturday morning, purchasing agents attending will be divided into three discussion groups—governmental, distributor, and industrial.

Loral Broadens Line

New York—Loral Electronics Corp., previously exclusively a military supplier, plans to enter the general market in the near future. The firm has set up a general products division to sell component parts and test equipment for aircraft and ships. The exact product line has not yet been announced.

Therefore, he suggested placing orders for one year's supply of all items where the usage is less than \$100 annually.

In addition to discussion on materials management, the Saturday program agenda included a talk on the economic outlook by David H. McKinley, associate dean, College of Business Administration, Pennsylvania State University, and one on trade relations by Sigmund Holverstott, manager-trade relations, Bethlehem Steel Co.

Holverstott said many think

of trade relations as a polite name for the old practice of reciprocity. However, he defined it as "teamwork—a function that will tend to produce a better, closer, mutually advantageous commercial relationship with our friends."

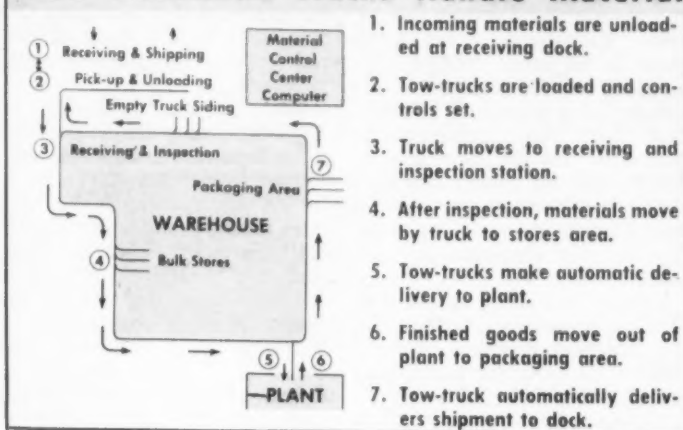
"I am not selling or buying anything," Holverstott emphasized, "but I am the connecting line in our company between the two divisions that buy and sell. It is my job," he explained, "to see that each knows what the other is doing and what effect the one may have on the other."



BUSINESS OUTLOOK: David McKinley (stand.) Pennsylvania State University's College of Business Administration, briefs P.A.'s on the nation's economy at Lehigh Valley-Reading Assn. purchasing seminar.



How Automatic Trucks Handle Material



Computer, Radio Direct Robot Truck Line at IBM

Poughkeepsie, N. Y.—Robot trucks, guided by transistorized radio control devices, transfer materials from receiving to warehouse and plant floor at the new warehouse of Data Systems Div. of International Business Machines Corp. And finished products move outbound to shipping via the same "railroad."

The automated materials handling system is directed by a central RAMAC computer, with "ghost trains" of trucks (see photo) moving through IBM's plant without human operators.

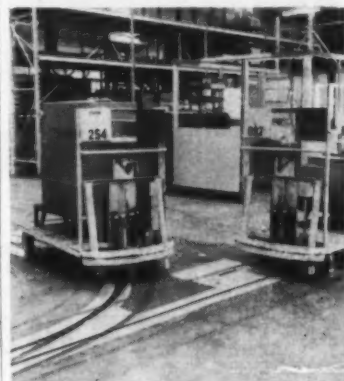
More automatic than a model train layout, the system provides smooth flow of incoming materials from the receiving dock area to manufacturing lines. The trucks are pulled along by a 6,300 ft. tow cable loop buried in the floor, and detach themselves at "sidings" adjacent to work and storage areas (see drawing).

Previously, materials distribution points supplying parts and assemblies used in the manufacture of the 7,000 series computers and other IBM data proc-

essing equipment was located in several scattered areas in the building. Now the 234,000 sq. ft. automated warehouse consolidates the entire operation, thus reducing such problems as excess time used in the transportation and the handling of parts.

And, the division reports, because the time lag between plant and warehouse has been cut, a smaller inventory is possible. Joseph LaForte, Materials Manager at the facility, comments, "Estimated savings to IBM, as a result of the Materials Distribution Center, exceed \$400,000 annually."

Prime mover between the cen-



LOOK, NO HANDS: Radio control guides trucks to plant destination without human operator at IBM.

No wonder his wife leaves the packing to him!

You can count on Union-Camp box designer Bob Pyle to come up with the most efficient corrugated interior packing—no matter what the product or how it is shipped.

THE GLASS BOWL in our picture is safe enough in Bob Pyle's hands. The trick is to see that it travels just as safely once it is packaged.

This takes an unusual combination of skill and experience. The kind Bob is known for. Bob is one of a team of Union-Camp corrugated box engineers who specialize in interior packaging of a product.

It's a challenging specialty. Just consider the problems of packaging a television set, for instance. Says Bob: "The set must be *locked* in position and perfectly cushioned against shock. Then we have to allow sufficient clearance on all sides so that the *finish* is protected against scratches. And the box should have sufficient stacking strength so that it can be tiered up high in the warehouse.

"Then there's the packing operation to consider. The box must be adaptable to high-speed assembly line operation so that the job can be done as quickly and cheaply as possible—consistent with the protection needed."

Other products, Bob points out, may call for different types of safeguards in the package. To keep out dust. To prevent corrosion or spoilage. Actually, the forms of inner packing are as varied as the items they protect.

Some of these items are well-known: food products, canned beverages and appliances, for example. But some others may surprise you. High-voltage equipment weighing over 300 pounds. Centrifugal pumps. Heavy industrial sewing machines. Formerly they required expensive crating. Now they travel safely and economically in

custom-tailored containers developed by Union-Camp box designers like Bob Pyle.

Oddly enough, small-cost items often can create the biggest problems. One case in point was a lamp sold in variety stores for only \$2.98. It was made of a fragile plastic, and the manufacturer's profit margin was so low that he had almost no budget for the intricate packaging that would seem to be necessary for proper protection. Bob Pyle devised a simple, inexpensive inner packing unit. To date, not a single lamp has reached its destination in a damaged condition!

Could a Union-Camp box designer like Bob Pyle help improve your product's protection, reduce your packaging and shipping costs? The answer is as near as your telephone. Call in a Union-Camp corrugated box representative. He'll tell you about our complete packaging evaluation program. It includes package analysis, box design and development, specifications control, merchandising counsel and in-plant surveys of your materials handling operation.

Or, a note on your letterhead will bring a prompt reply. Why not write today?

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CORRUGATED BOXES

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Chicago, Ill.: 4545 West Palmer
†Benton Harbor, Mich.: 11th St. & Britain Ave.
†Monroe, Mich.: 1109 East Elm Ave.
†Eaton Rapids, Mich.: P.O. Box 8
*Baltimore, Md.: Eastern Box Co.
Wagner's Point
Jamestown, N.C.: 3704 Point Pleasant Rd.
Spartanburg, S.C.: P.O. Box 1965
Savannah, Georgia: P.O. Box 570
Lakeland, Florida: P.O. Box 454

*Subsidiary Companies †River Raisin Division

ter and the plant is an in-the floor tow-line system. This conveyor system provides programmed dispatching, recirculation within individual loops to accommodate peak flow periods, and an automatic delivery of empty tow trucks at the receiving dock area.

The tow-line conveyor itself consists of a powered in-floor chain arranged in four independently-driven loops. Tow trucks are switched from loop to loop by towpin mechanisms similar to the cable grips used on cable cars actuated by retractable cams. All four loops may be operated independently, minimizing the effects of down time of any single loop.

Tow-line trucks may be dispatched to any of 13 stations in the system. Each station has three spur lines, with a total capacity of 18 tow-trucks. If a particular station is loaded to its maximum capacity, the next tow truck programmed to enter that station will automatically re-circulate within the loop on which the spur is located, until the station can accommodate the truck.

Each truck is equipped with a transistor crystal oscillator (TCO) unit, which directs it to its dialed destination. The TCO unit generates a coded signal that is checked by a floor unit at each station. If the signals correspond, the truck switches off the main loop into a spur line at the intended destination.

Quarterback in this operation is an IBM 305 RAMAC computer. Two independent computers, linked to a common disc storage file of information, control more than 40,000 parts and assemblies in the building.

The computer provides daily inventory control data. Parts withdrawal is first processed through the computer, providing data on parts availability, location, destination, and other essential details.

Keezer: Before You Build Your Bomb Shelter . . .

(Continued from page 1)
out we are, for the subversive accident that ends it all, the trumpets might sound by the hour and no one would follow them into battle—the blue-peter might fly at the truck, but who would climb into a sea-going ship?

"Think (if these philosophers were right) with what a preparation of spirit we should affront the daily peril of the dinner-table: a deadlier spot than any battlefield in history, where the far greater proportion of our ancestors have miserably left their bones! What woman would ever be lured into marriage, so much more dangerous than the wildest sea? And what would it be to grow old? For, after a certain

distance, every step we take in life we find the ice growing thinner below our feet, and all around us and behind us we see our contemporaries going through.

"By the time a man gets well into the seventies, his continued existence is a mere miracle; and when he lays his old bones in bed for the night, there is an overwhelming probability that he will never see the day. Do the old men mind it, as a matter of fact? Why, no. They were never merrier; they have their grog at night, and tell the raciest stories; they hear of the death of people about their own age, or even younger, not as if it was a grisly warning, but with a simple child-like pleasure at having outlived some

one else; and when a draught might puff them out like a guttering candle, or a bit of a stumble shatter them like so much glass, their old hearts keep sound and unafraid, and they go on, bubbling with laughter, through years of man's age compared to which the valley at Balaclava was a safe and peaceful as a village cricket-green on Sunday. It may fairly be questioned (if we look to the peril only) whether it was a much more daring feat for Curtius to plunge into the gulf, than for any old gentleman of ninety to doff his clothes and clamber into bed.

"Indeed, it is a memorable subject for consideration, with what unconcern and gaiety mankind pricks on along the Valley of the Shadow of Death. The whole way is one wilderness of snares, and the end of it, for those who fear the last pinch, is irrevocable ruin. And yet we go spinning through it all, like a party for the Derby. Perhaps the reader remembers one of the humorous devices of the deified Caligula: how he encouraged a vast concourse of holiday-makers on to his bridge over Baiae bay; and when they were in the height of their enjoyment, turned loose the Praetorian guards among the company, and had them tossed into the sea. This is no bad miniature of the dealings of nature with the transitory race of man. Only, what a chequered picnic we have of it, even while it lasts! and into what great waters, not to be crossed by any swimmer, God's pale Praetorian throws us over in the end.

"We live the time that a match flickers; we pop the cork of a ginger-beer bottle, and the earthquake swallows us on the instant.

"As courage and intelligence are the two qualities best worth a good man's cultivation, so it is the first part of intelligence to recognize our precarious estate in life, and the first part of courage to be not at all abashed before the fact. A frank and somewhat headlong carriage, not looking too anxiously before, not dallying in maudlin regret over the past, stamps the man who is well armoured for this world. . . .

"To be otherwise is to ossify; and the scruple-monger ends by standing stockstill. Now the man who has his heart on his sleeve, and a good whirling weathercock of a brain, who reckons his life as a thing to be dashingly used and cheerfully hazarded, makes a very different acquaintance of the world, keeps all his pulses going true and fast, and gathers impetus as he runs, until, if he be running towards anything better than wildfire, he may shoot up and become a constellation in the end. . . .

"Every heart that has beat strong and cheerfully has left a hopeful impulse behind it in the world, and bettered the tradition of mankind. And even if death catch people, like an open pit-fall, and in mid-career, laying out vast projects, and planning monstrous foundations, flushed with hope, and their mouths full of boastful language, they should be at once tripped up and silenced: is there not something brave and spirited in such a termination? and does not life go down with a better grace, foaming in full body over a precipice, than miserably straggling to an end in sandy deltas?"

These observations were made

by Robert Louis Stevenson who is perhaps best known to you as the author of "Treasure Island" and "Kidnapped." He made them in an essay entitled "Aes Triplex" which, at least in the edition of a tiny book where I met them, was published by Scribners' just 60 years ago—in 1901. But for what I find their striking relevance they might have been made yesterday or today, or even tomorrow for that matter.

I am indebted to Stephen DuBrul, executive in charge of the Business Research Staff of General Motors, for introducing me to what I find Stevenson's heartening and inspiring rejection of the idea that we had better get ourselves preoccupied with the construction and occupation of survival holes.

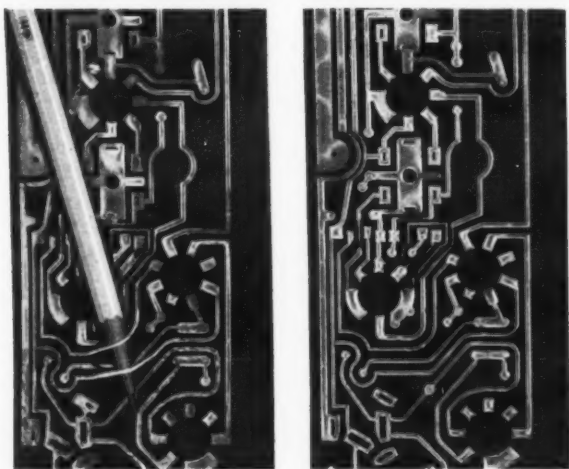
My debt is to Roderick Marshall, lecturer in English at Columbia for telling me of the significance of that unusual title,

"Aes Triplex." It means triple bronze, "aes" being the Latin word for bronze, and comes from Ode 3 in Book I of a book of odes and epodes by Horace called "Cormina."

The ode is addressed to Augustus Caesar on the occasion of his departure from Rome on a journey to the East. "To go to the Orient one must be very brave," sang Horace with a grace and beauty conspicuously absent from this rendition. "He must have his heart encased in aes triplex (or triple bronze.)"

And so must we have our hearts and nerves encased in triple bronze lest the ever present possibility of prompt atomic cinderization tempt us into turning into grubs and moles. But I hope we will manage to make it (I certainly intend to try.) and that my guest columnist Robert Louis Stevenson has given you, as he has given me, some inspiration to try hard.

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G-10R uses no structural adhesive, meets all G-10 specifications, and doesn't cost a penny more.

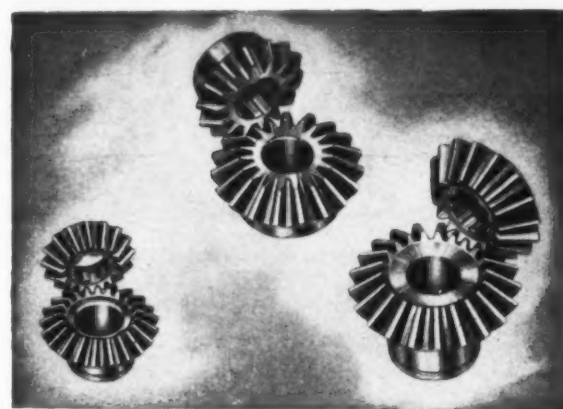
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Nobody argues with the old axiom, "Time is Money"—and it's more and more costly to have assembly operations interrupted or slowed down by ill-fitting or defective parts. G.S. customers (whose roster reads like a Blue Book of American industry) don't worry about such problems. They've learned that they can rely on famous G.S. precision manufacturing methods and rigid inspection systems for Small Gearing made right, every time—Gearing which meets demanding specifications, makes assembly smoother, gives efficient performance in product use.

Perhaps you use full-generated and hardened Straight Tooth Bevel Gears cut from alloy steels, like those illustrated (they're used in outboard motors). Perhaps you need Spiral Bevels or Zerols. Whatever your requirements for Bevel Gearing, including Helicals, Internals or other types, G.S. engineering and G.S. quality belong on your production team!



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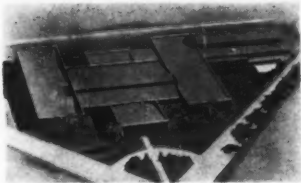
16 plants from coast to coast...



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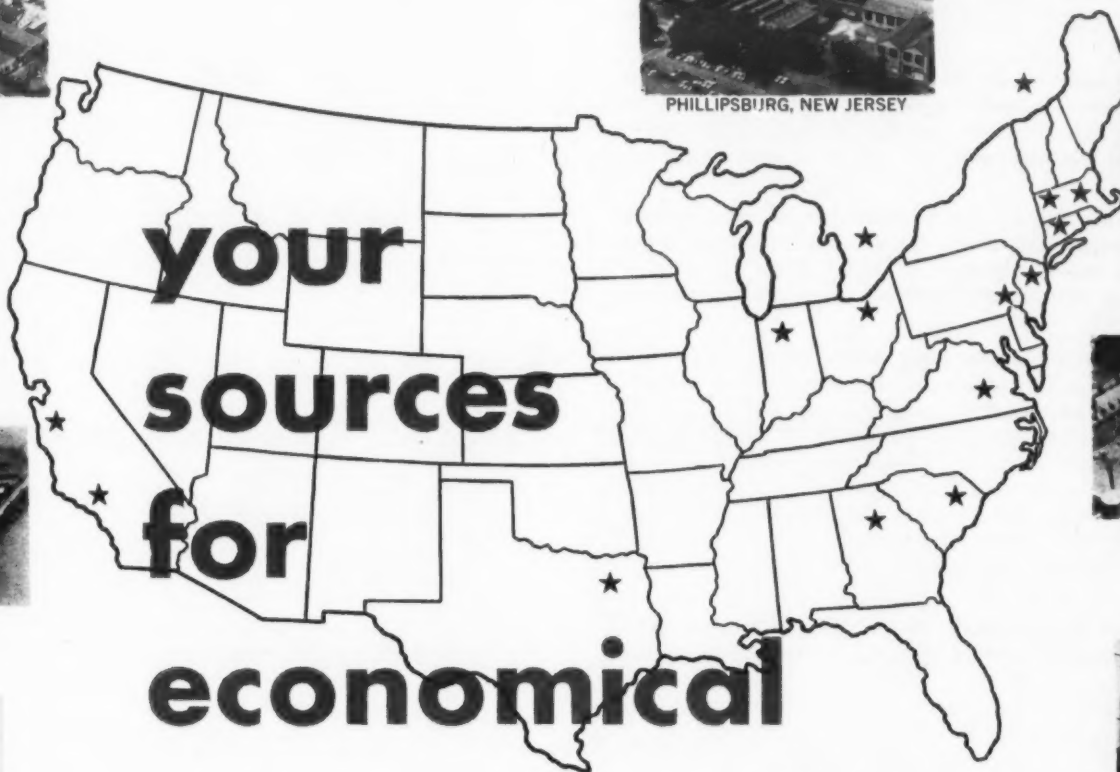
HOLYOKE, MASSACHUSETTS



LOWELL, MASSACHUSETTS

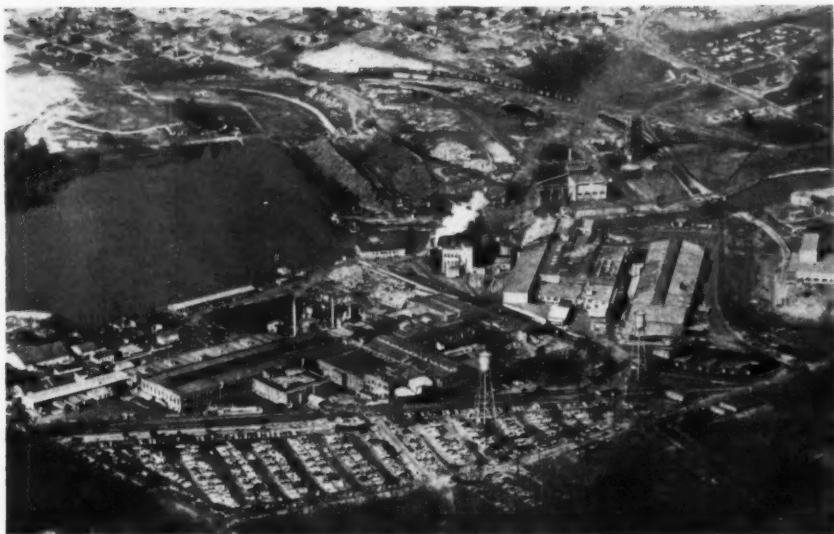


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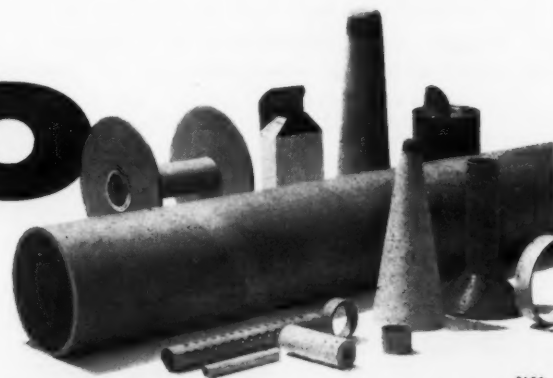
If a paper product can be engineered to do the job and effect a savings over the product or method it replaces—*Sonoco can make it!* Sonoco has the necessary skill, knowledge and production facilities to fulfill your requirements. *Your inquiry is invited at no obligation.*

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Product Perspective

EXTRUDED ALUMINUM PARTS may well be cheaper and more accurate than pieces made by other production processes such as roll forming, casting, forging and machining. Cost-cutting is often possible by using one extrusion to replace an assembly of other parts (eliminating machining and joining), or by slicing up a long extrusion—like a loaf of bread—to form many short sections.

EXTRUSION PROCESS heats an aluminum billet to a semiplastic (but not molten) state and squeezes it under hydraulic pressure through an aperture of specified shape. This process improves strength characteristics through linear orientation of the molecules and results in dense, void-free products.

Since the billet is pushed through the die, the entire shape must be continuous and parallel to the axis. Within this limitation, virtually any shape may be produced, including solids, semi-hollows and hollows. According to Rogers Industries, a large Midwestern extrusions firm, most parts will fit within a 6-in. circle.

Close tolerances ($\pm .006$ to $.020$ -in., depending on the shape) are possible at standard prices. Maximum wall thickness will vary with over-all size and with the particular alloy specified, generally ranging from $.045$ to $.062$ -in. (small solid and hollow shapes) up to $.156$ -in. (massive extrusions). This minimum wall thickness is required so that the extruder can maintain standard tolerances and eliminate warping and other misalignments. Although these standard tolerances and dimensions have been determined and charted by the Aluminum Extruders Council to cover most general situations, it is often possible to get even closer tolerances on certain shapes without increasing costs.

TOOLING COSTS are very low—normally \$100 to \$200 for the majority of parts, although costs for massive sections may run up to \$1,000. Since tooling takes relatively little labor to produce, the industry is frequently able to produce finished parts on short notice. Rogers estimates that normal lead time from print approval to part shipment runs 10 days for solids, three weeks for hollow shapes. If time is extremely critical and part contour not too complex, the order can often be shipped within 24 hours by using a non-heat treated cold punched die.

APPLICATIONS generally fall into one of three classes: as run (simply cut to length after coming through the die), sliced parts (parts sliced off the extrusion like a loaf of bread), and secondary machined (pieces stamped, drilled, milled or turned to get finished shape).

- As run parts include window frame elements which need be welded only at the corners; structural beams for aircraft, automotive and other transportation uses; cooling or heating tubes with integral radiation fins and decorative trim and moldings; two piece conduit for the electronic and electric industries; heavy duty rub rails and trim with concealed fasteners for radiant heating coils.

Dovetails may be added to the product at no extra cost and snap-lock assemblies are possible on applications requiring large surface areas. Wide floor plates with integral stiffeners may be produced by extruding a crescent shaped profile, then flattening it.

- Sliced parts are popular in the hardware trade for such uses as coat hooks, soap dishes, towel bar holders, and high fashion cabinet door handles. One plumbing fixture maker is investigating market potential for faucet handles made by using a tear-drop shaped extrusion with internal serrations for attaching the handle to a valve stem included in the design. This would eliminate broaching operation needed to make the serrations in brass castings.

- Secondary machined parts include a grille section on a '61 model car that was stamped to remove sections of the extrusion and improve the over-all appearance. This maker switched to the new design in the middle of the model year from a roll formed mild steel part that also required stamping. The aluminum gave greater strength, lower cost, and easier installation with about equal appearance.

A trade show producer used three basic extrusions cut to length and pre-drilled to make strong, low-cost modular framing for exhibit booths. The components reduced assembly costs 20% over roll formed metal or wooden frameworks. A hardware manufacturer makes an extremely precise builder's level by punching or drilling a circular section out of an I-beam extrusion. Aluminum ladders are made by similar methods using shorter extrusions for cross members.

FINISHING will improve appearance or wear resistance, although the natural finish (and corrosion resistance) is adequate for most uses.

- Mechanical finishes include various grades of matte or lustrous surfaces produced by peening, scratch brushing, sand blasting, or polishing. A coat of clear or tinted lacquer will protect the surface. These finishes are often used in architectural products and housewares.

- Chemical finishes, such as etching, can be used to get a nondirectional frosted surface. A mild etch will cut the gloss, while chemical dipping or "bright dipping" produces a chromium-like silvery mirror surface.

- Anodic finishes are perhaps the best known surface technique for aluminum products. They give a hard, tenacious coating which resists both corrosion and abrasion and can be made to simulate a soft chrome plating, or readily dyed to produce a rainbow of colors and hues—including gold. Other finishes include chromate conversion for corrosion resistance and superior paint base, and chrome plating by use of a zincate prepri-

Here's your weekly guide to . . .



Voltage Indicator

Doesn't Contact Wires

Sensing instrument gives positive meter indication of voltage from energized power lines without making direct wire contact. The electrostatic field actuates transistor circuits in the unit, which also will trace and indicate the location of circuit failure. The instrument indicates voltages from 110 v. a.c. and up.

Price: \$49.50. Delivery: 30 days.
Wintronics, Inc., 213 S. Hawthorne Blvd.,
Hawthorne, Calif. (PW, 11/27/61) SIC #3611

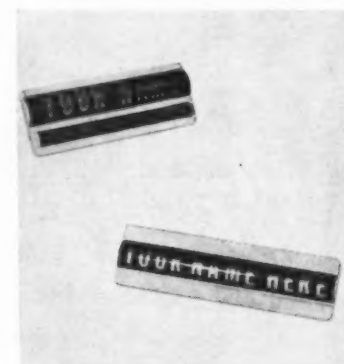


Bookcase

Stands 42-in. High

Bookcase, 42 in. high x $37\frac{3}{4}$ in. wide x $12\frac{5}{8}$ in. deep, comes with two sliding shelves that are adjustable on $1\frac{1}{2}$ -in. centers. The bookcase, finished in gray, baked-on enamel, is complete with rounded top and end finishing panels. Seven-inch high book-stops that hook over the front of the shelves and snap in place are available as accessories.

Price: \$24.55. Delivery: immediate.
Lyon Metal Products, Inc., 10 Plant Ave.,
Aurora, Ill. (PW, 11/27/61) SIC #2522



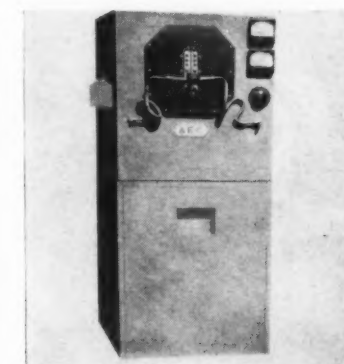
Name Plate

Permits Letter Changes

Name plates for desk or wall come in one- or two-line styles and $6\frac{1}{2}$ - or $8\frac{1}{2}$ -in. lengths. Assorted letters printed in silver on black are supplied with the plates but on order of three or less the letters needed should be indicated. A clear plastic protects the letters, which can be removed for changes.

Price: \$3.25 to \$4/each. Delivery: 15 to 90 days.

Plastic Products, 4400 Acacia Dr., South
Euclid 21, Ohio. (PW, 11/27/61) SIC #3079

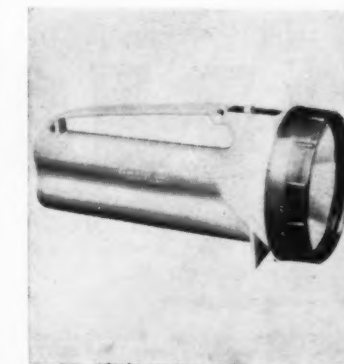


Induction Heating Unit

Has 15-Kw. Output

Induction heating unit for applications such as melting, forging, annealing, and controlled heat treating has a 15-kw. output. The unit includes a 30-hp. induction motor and can be operated with no load in the coil without harming the generator. It is 64 in. high, 28 in. wide, 36 in. deep, and weighs 850 lb.

Price: \$3,995. Delivery: 2 to 3 wk.
Anderson Engineering Corp., 13671
Grand River Ave., Detroit 27, Mich. (PW,
11/27/61) SIC #3567



Flashlight

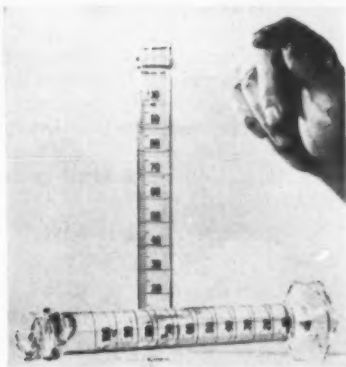
Produces 80,000 Candlepower

Waterproof flashlight operates on six ordinary batteries to deliver 80,000 candlepower. The 10-in. long unit has a $4\frac{1}{4}$ in. die-cast reflector that permits the high brilliance. The unit is molded of polyethylene plastic, is sealed for operation even under water, and has a handle for convenient carrying and use.

Price: \$9.95. Delivery: immediate.
Dog Supply House, Inc., Bainbridge,
Ohio. (PW, 11/27/61) SIC #3642

New Products

Price data that accompany each product description are list or approximated prices supplied by manufacturers. Unless otherwise noted, prices quoted are for the smallest quantity that can be ordered.



Glass Cylinder

Has Protective Bead

Cylinder has protective bead to reduce breakage, and red graduations are permanently fired into rather than etched into the glass for further strengthening. Cylinders come in 10-, 25-, 50-, 100-, and 250-ml. sizes that are respectively graduated in .1 ml., .2 ml., 1 ml., and 2 ml.

Price: \$2.10 to \$4.40/each. **Delivery:** immediate.

Corning Glass Works, Corning, N.Y.
(PW, 11/27/61) SIC #3229



Two-Way Radio

Has Low Battery Drain

Transistorized, two-way radio that mounts under the dash or on the floor has a battery drain on standby of 0.3 amp. that lets an operator leave it on without having to idle the engine. It is available for operation on frequencies in the 150- to 174-mc. and 25- to 50-mc. bands. Five-w. volume permits highly audible messages.

Price: \$459.75. **Delivery:** 4 to 6 wk.
Motorola, Inc., 4501 W. Augusta Blvd.,
Chicago 54, Ill. (PW, 11/27/61)

SIC #3662



Flowmeter

Handles Many Liquids

Electromagnetic flowmeter responds to fluid velocity, providing a true volumetric reading of a variety of fluids and slurries. It causes no more pressure loss than an equivalent pipe length and is offered with a 3-step range adjustment of 10 gpm., 50 gpm., and 100 gpm. Continuous range adjustment is optional.

Price: \$1,050 (average). **Delivery:** 12 wk.
Hays Corp., 742 E. Eighth St., Michigan
City, Ind. (PW, 11/27/61) SIC #3821



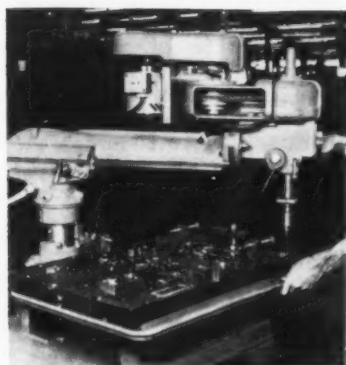
Instrument Pen System

Converts Most Equipment

Marking system for recording equipment has replaceable ink cartridges and sealed capillary tubing. It can replace most systems now in use and is installed easily in less than 10 min. The kit includes one of four styli, tubing, and four ink cartridges which hold a 2-yr. ink supply.

Price: \$12. **Delivery:** 3 to 5 days.
Esterbrook Pen Co., 200 Cooper St.,
Camden 1, N.J. (PW, 11/27/61)

SIC #3951



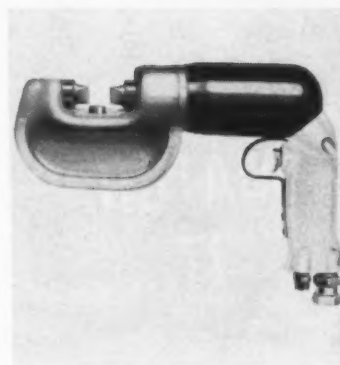
Radial Drill Press

Has Ram-Type Movement

Radial drill press comes in eight models with 4 1/4- or 6-in. spindle travel and 30- or 42-in. column length. The ram-type unit's spindle can be moved to the work, and the drill press head moves in and out through an 18-in. travel radius. Head, ram, and cradle swivel 360 deg. around the column.

Price: \$760 to \$825 (without motor and base). **Delivery:** immediate.

Rockwell Mfg. Co., 400 N. Lexington
Ave., Pittsburgh 8, Pa. (PW, 11/27/61)
SIC #3541



Rod Cutter

Delivers 27 1/2-Ton Force

Power cutter comes in three sizes of air-operated hydraulic units that delivers from 10 1/2 tons to 27 1/2 tons of force to cut rods up to 1 in. in diameter. A portable power cell the size of a canister-type vacuum cleaner converts normal shop air pressures to hydraulic pressures up to 7,000 psi.

Price: \$480, \$535, and \$625 (cutter); \$860 (power cell). **Delivery:** immediate.

Chicago Pneumatic Tool Co., 6 E. 44th
St., New York 17, N.Y. (PW, 11/27/61)
SIC #3548

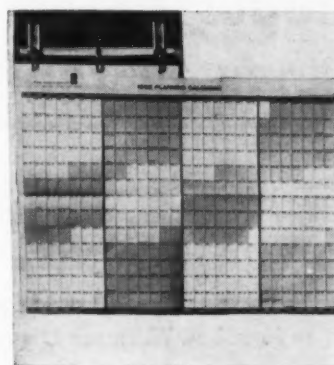


Atmosphere Sampler

Checks for Dust

Sampler automatically collects air samples on a paper tape, evaluates them, and records the dust concentration on a strip chart. Using sensitized paper tapes, it also samples and records gas concentrations. A synchronous motor drives the strip chart and accurately relates the time of day at which the sample was taken.

Price: \$657. **Delivery:** immediate.
Gelman Instrument Co., Chelsea, Mich.
(PW, 11/27/61) SIC #3821



Planning Calendar

Holds Year's Data

Calendar with space for brief notations at each day of the year permits at-a-glance review of events. Three styles include a full year on one sheet, half a year on each side of a sheet, and twelve sheets with one for each month. All fold to fit a standard three-ring binder.

Price: \$10 to \$21 (for quantities of 25). **Delivery:** immediate.

Skokie Valley Design Group, 75 E.
Wacker Dr., Chicago, Ill. (PW, 11/27/61)
SIC #2751



Moisture Monitor

Checks Most Gases

Moisture monitor with electrolytic cell that is specific to water can be used with nearly all gases. It obtains accurate measures of water in gases or gaseous mixtures from less than 1 ppm. to 1,000 ppm. water by volume and is designed for operation from a plug-in power source or an internal battery.

Price: \$435. **Delivery:** immediate.
Consolidated Electrodynamics Corp., 360
Sierra Madre Villa, Pasadena, Calif. (PW,
(PW, 11/27/61) SIC #3821



Plastic Forming Tool

Pre-Heats Materials

Hand-held, motor-driven tool produces a strong jet of hot air for plastic pre-heating, PVC sheet welding, shrink-on applications, etc. It comes with a circular nozzle of over 3/4-in. dia. and a flat nozzle 2 3/4 in. long and 1/2 in. wide. The unit plugs into a standard wall outlet and delivers an air jet to 750 F measured 8 in. from the nozzle.

Price: \$98. **Delivery:** immediate.
Weldotron Corp., 907 Frelinghuysen
Ave., Newark 14, N.J. (PW, 11/27/61)
SIC #3559



Utility Cart

Has Unobstructed Shelves

Utility cart for general office use has shelves without flanges or exposed nuts or bolts so that materials can be slid on and off easily. The unit is 15 in. wide, 30 in. long, and 45 in. high, with 13-in. clearance between shelves. A tubular handle is recessed, and the all-steel construction is finished in light gray baked enamel.

Price: \$39.80. **Delivery:** immediate.
Bay Products Div., 1801 W. Cambria St.,
Philadelphia 32, Pa. (PW, 11/27/61)
SIC #3999



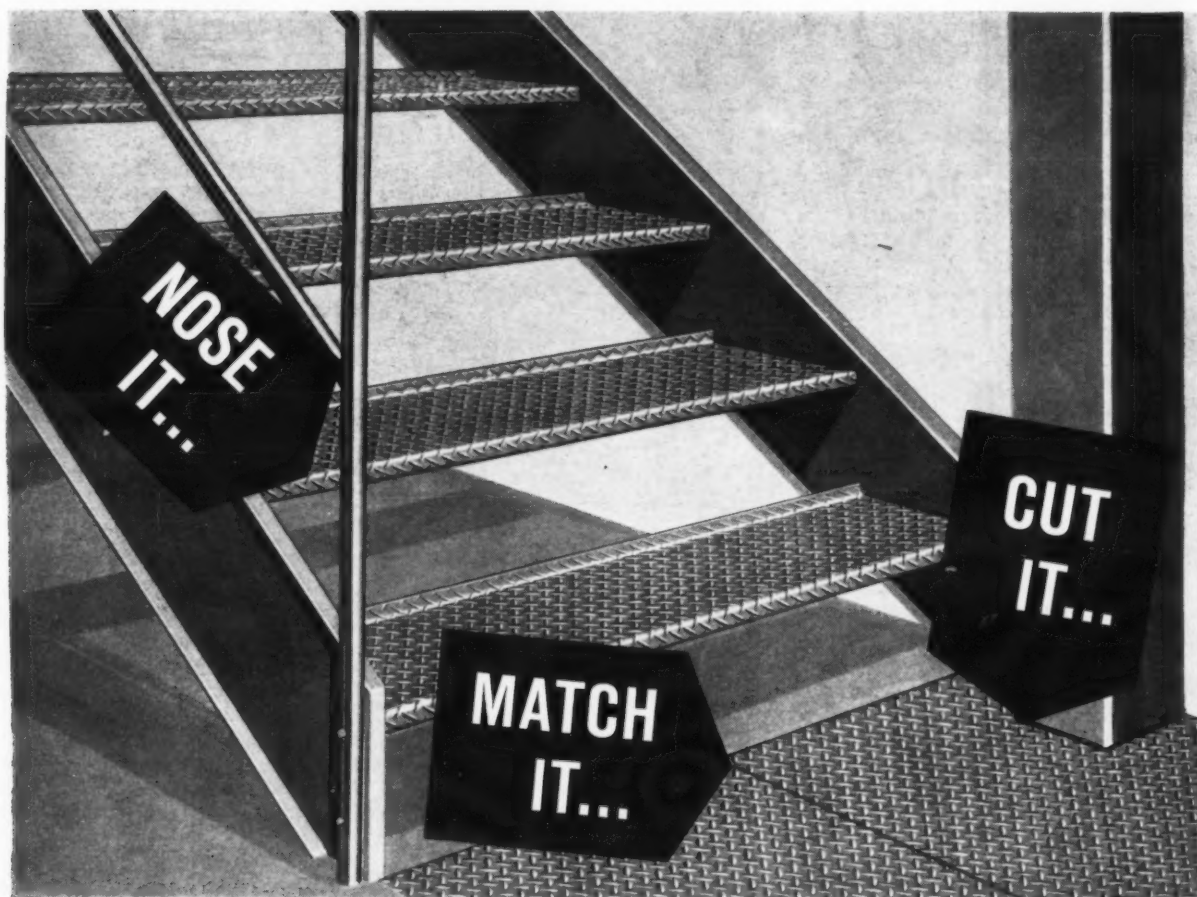
Mobile Cot

Meets Emergency Needs

Mobile cot of aluminum and steel tubing is dependable unit for movement of injured personnel. It easily lifts and lowers hydraulically to any level and remains consistently level at all heights. An adjustable back lift is standard and an automatic foot-drop design is offered as optional.

Price: \$199.50 (plus mattress). **Delivery:** 2 wk.

Bomgardner Mfg. Co., 1384 Hird Ave.,
Cleveland, Ohio. (PW, 11/27/61)
SIC #3999

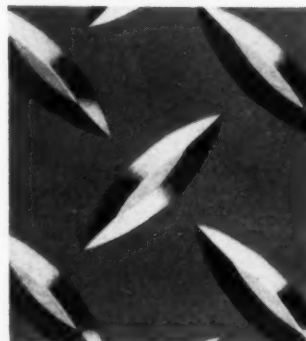


Alan Wood Super Diamond floor plate ...is easy to fabricate

Here's a heavy duty floor plate that can be sheared, formed, welded, and easily matched. The arrangement of the unique A. W. Super Diamond pattern allows you to bend it at any place.

A. W. Super Diamond will last for years... provides a safe, non-skid footing at all times. Easy to clean? A. W. Super Diamond can be swept, hosed or mopped easily... from any angle.

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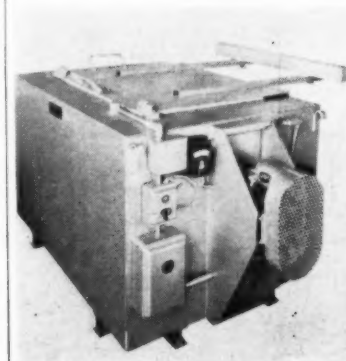
Battery Charger

Has 1% Regulation

Static, self-contained charger for lead-acid and nickel-cadmium batteries comes with standard charging rates of up to 100 amp.; special units are available on request. It maintains output voltage from no load to full load within $\pm 1\%$ of the adjusted nominal voltage and $\pm 10\%$ changes in line voltage. Input is 115 v. a.c. to 230 v. a.c., and efficiency ranges from 75% to 80%.

Price: \$230 to approx. \$1,000.
Delivery: 6 to 8 wk.

Fansteel Metallurgical Corp.,
North Chicago, Ill. (PW, 11/27/61)
SIC #3999



Die Heating Oven

Loads From Top

Die heating oven of top-loading design heats dies used in extrusion presses at up to 1,100 F. Rugged construction permits handling of dies weighing up to 4,000 lb., and a horizontal air circulating fan maintains close temperature uniformity. The oven comes in a range of sizes with automatic indicating controls and counter-weighted door. The illustrated unit is 26 x 28 x 42 in.

Price: approx. \$3,500. **Delivery:** 3 to 5 wk.

Trent, Inc., 5000 Wilde St.,
Philadelphia 27, Pa. (PW, 11/27/61)
SIC #3567

FIGURES

STAND

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ANALYSIS PADS

by

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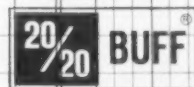


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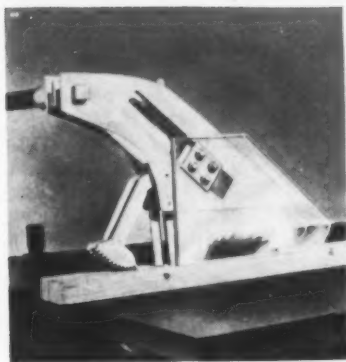
ANALYSIS PAD

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HOLYOKE, MASSACHUSETTS

Your Guide to New Products



Safety Guard

Covers Circular Saw

Plastic shields form gliding-action guard for table-model circular saws. It lets the operator see all the work operations and need never be removed, thereby reducing any risk of injury. A splitter adjusts the shield to clear the work when it isn't used. A smaller size also is available for home-workshop size circular saws.

Price: \$62.25. **Delivery:** immediate.
General Scientific Equipment Co., Philadelphia 50, Pa. (PW, 11/27/61) SIC #3079



Linearity Tester

Checks Coil Meters

Unit tests linearity of d.c. moving coil meters and can be used to check out a new shipment. With an accuracy of $\pm 2\%$ or better, it checks ten points on meters that may have full-scale sensitivity from 50 microamp. to 1 ma. By switching on a variable shunt across meter terminals it tests undamped meters too.

Price: \$99.50. **Delivery:** 2 to 4 wk.
IB Instruments, Box 2460, Cleveland 12, Ohio. (PW, 11/27/61) SIC #3611



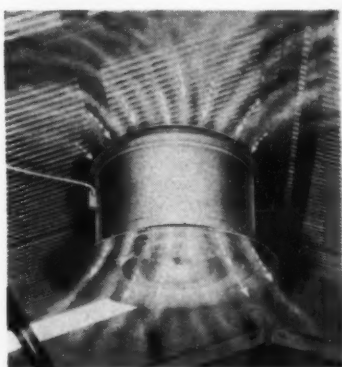
Splitting Tool

Removes Nuts

Tool for removing of rusted nuts without damaging the bolt threads has a looped end with a $\frac{3}{4}$ -in. opening that fits over the nut. The sleeve of the 4-in. long tool is fitted with a wedge shaped like a cold chisel, which is operated by a screw with a hex head. When the hex head is turned with a wrench, the wedge is driven into the side of the nut, splitting and removing it.

Price: \$3.95. **Delivery:** immediate.

Burroughs Tool & Equipment Corp., 2429 N. Burdick St., Kalamazoo, Mich. (PW, 11/27/61) SIC #3423



Heat Recirculator

Mounts Near Ceiling

Recirculating device mounts near ceiling to recover heat trapped near the roof line and return it to the floor area. The motor-operated fan pulls heat into the top of the unit which is easily mounted without holes in the roof and diffuses it down through conical openings for maximum floor coverage. The unit is applicable to new and old construction and is available in sizes from 280 cfm. to 30,000 cfm.

Price: \$50 to \$650. **Delivery:** immediate.

Genie-Air Products, 3001 E. 11th St., Los Angeles 23, Calif. (PW, 11/27/61) SIC #3564

Think Quality...



THE CONSISTENT QUALITY OF HOLO-KROME THERMO-FORGED* SOCKET SCREWS CUTS REJECT AND IN-WARRANTY SERVICE COSTS

Are inspection, in-warranty and replacement costs putting a tight squeeze on your profits? Join other profit-conscious industrial leaders in turning to quality to reduce these costs and increase profits. THERMO-FORGED socket screws are produced by a patented electronic forging process which pre-conditions the metal. This makes possible exact control of metal flow, and allows us to maintain tolerances impossible with other forging methods. Thread rolling and subsequent operations are controlled more precisely than ever. As a result, THERMO-FORGED socket screws are unmatched in quality,

free from flaws, checks and hidden imperfections, with dimensional precision unattainable with ordinary forging methods. THERMO-FORGED socket screws can materially increase your profits by reducing rejects and in-warranty service costs. See your authorized Holo-Krome distributor or write for more information.



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Your Guide to New Products



Hard Cap Gear

Mounts Face Shield

Headgear that fits any make of hard cap has molded nylon hooks that slip over the brim to permit mounting of face shield. It is available with plastic visor mounting strip, aluminum mounting strip, or with a fiber brow guard on the plastic strip.

Price: \$3.50 (plastic), \$3.85 (aluminum), and \$4.35 (brow guard). **Delivery:** immediate.

Willson Products, 212 E. Washington Ave., Madison 10, Wis. (PW, 11/27/61) SIC #3842



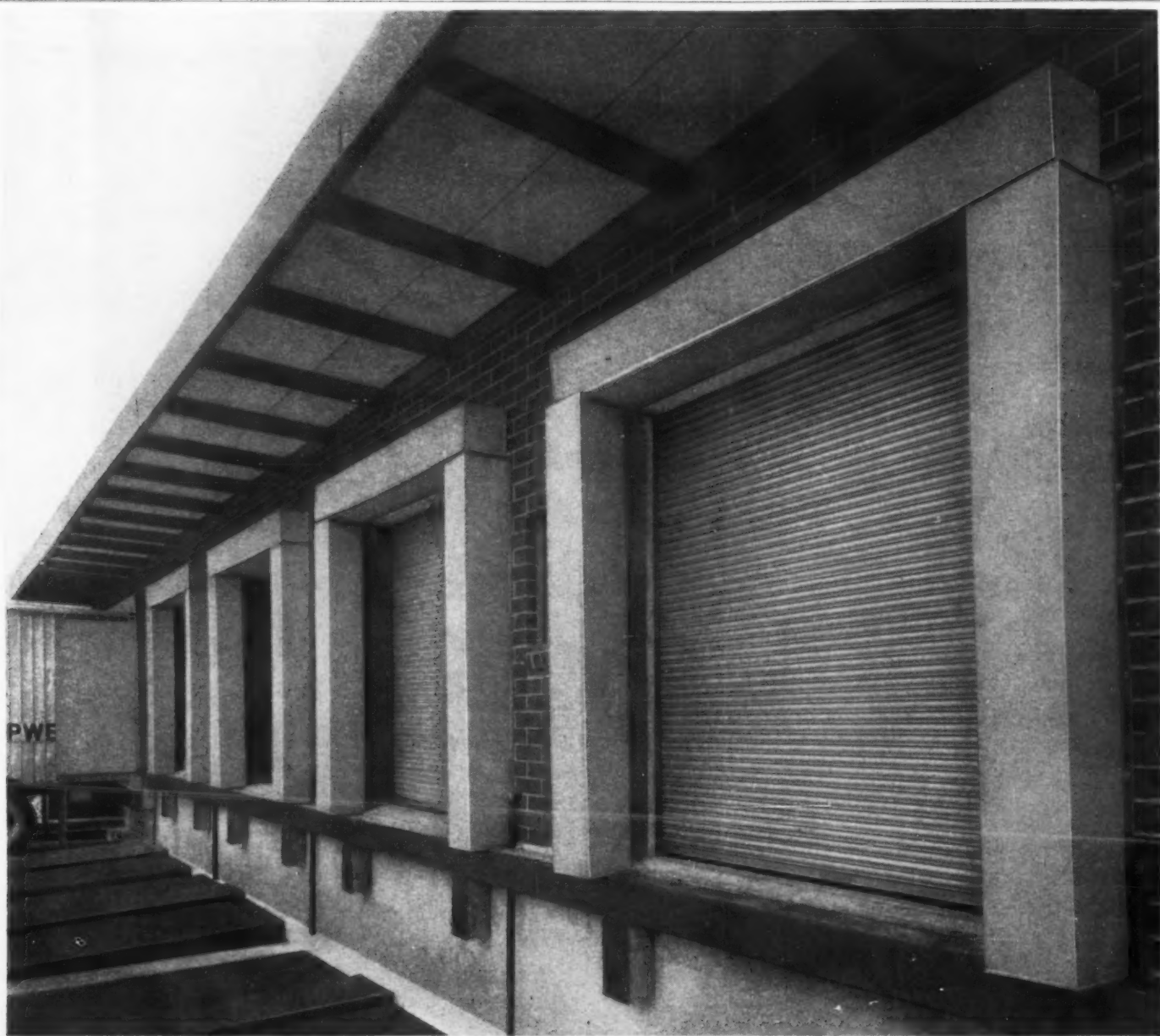
Luminaire

Works with Fluorecents

Fluorescent luminaire is a surface-mounted unit with prismatic lens on bottom and plastic panels on the side. It can be installed singly or in rows and comes in 4- and 8-ft. lengths. White opaque escutcheon plates are offered for closing the ends of the one-piece enclosure.

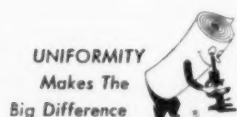
Price: \$20.30 to \$39.10. **Delivery:** immediate.

Westinghouse Electric Corp., 1216 W. 58th St., Cleveland, Ohio. (PW, 11/27/61) SIC #3642



A TIGHT FIT—This plant, in the baby wear division, is P. H. Hanes Knitting Company's plant at Galax, Virginia and is the largest of four recently built plants. Most of their production, the manufacture of infants' and babies' underwear and apparel, is shipped by trailer truck throughout the country. Truck seal bumpers, as seen above, have been installed to provide almost air-tight seals between trucks and the loading platform. They are made from a solid compressive material that has been covered with canvas and bolted around the loading platform openings. The trucks back onto leveling platforms which raise or lower the level of the truck floor with that of the loading platform. Trucks are backed tightly into these compressive bumpers which then compress to seal off the truck with the loading platform. Bumpers are 12 x 12 and covered with #8 duck. Covers were made for Hanes by the Dize Tent & Awning Co. from Mount Vernon duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc., and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.



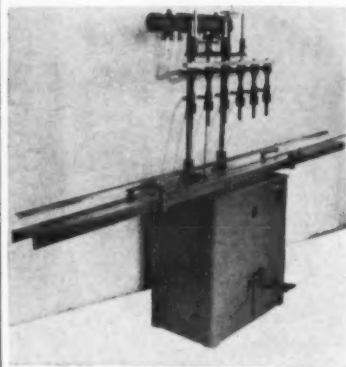
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A LEADER IN INDUSTRIAL TEXTILES



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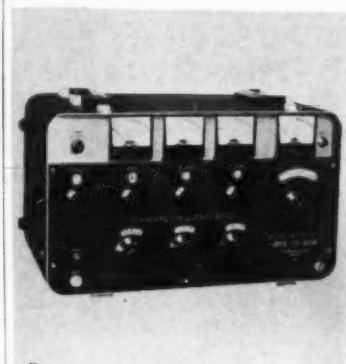
Filling Machine

Has 700-Gph. Rate

Machine with 700-gph. rate, fills containers of all sizes and made of any plastic. The semi-automatic unit has six valves, is operated by foot pedal, and permits quick changeover from one size container to another without the use of extra changeover parts. It handles almost any kind of liquid and assures an accurate fill with micrometer screw adjustments.

Price: \$1,425. **Delivery:** 4 to 6 wk.

Perl Machine Mfg. Co., Inc., 68 Jay St., Brooklyn 1, N.Y. (PW, 11/27/61) SIC #3999



Frequency Meter

Aligns Two-Way Radios

Frequency meter designed to measure and align the frequency of two-way mobile radio equipment is self-contained and provides direct read-out. The portable instrument's sensitivity allows measurement of the smallest transistorized transceiver and measures frequencies in the three mobile radio bands without accessory instruments, headphones, compensation charts, or computations.

Price: \$980. **Delivery:** 2 wk. **Measurements, Boonton, New Jersey. (PW, 11/27/61)**

SIC #3611



Voltage Regulator

Has Solid State Circuits

D.c. to d.c. voltage regulator with completely solid state circuits is intended for application for industrial systems which require a regulated decrease in d.c. voltage for transistorized circuits. Output is a constant 12 v. from 0 to 2 amp. and input voltage is from 20 v. to 30 v., or 30 v. to 60 v.

Price: \$350. Delivery: 90 days.

Moore Associates, Inc., 893 American St., San Carlos, Calif. (PW, 11/27/61)
SIC #3612



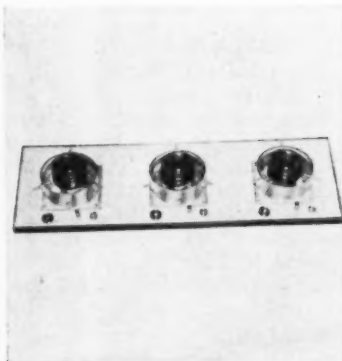
Loader

Lifts 1,000 Lb.

Compact loader (9 ft. long including scoop) has lift capacity of 1,000 lb. and a lift height of over 8 ft. The load has four-wheel drive and maneuvers in minimum space to permit its use in confined areas. It has no transmission or differential and is supplied with a scoop bucket of the size and shape best suited to the kind of load to be handled.

Price: \$2,750 (basic). Delivery: immediate (after January 1).

Melroe Mfg. Co., Gwinner, N.D. (PW, 11/27/61)
SIC #3531



Lapping Machine

Runs at 280 Rpm.

Table equipped with three 7-in. lapping heads is designed primarily for lapping of germanium and silicone although upper plates for harder materials can be supplied. Motor drive is through a variable speed d.c. gear head motor that delivers maximum machine speed of 280 rpm. A pan in the lapping area is sloped and has a drainout point to permit collection of excess lapping compound.

Price: \$1,600. Delivery: 6 to 8 wk.

Research Instrument Co., Inc., 558 Main St., Westbury, N.Y. (PW, 11/27/61)

SIC #3541

Purchasing Week Definition

Packaging Adhesives

Cold-Setting Adhesive—An adhesive which after the addition of a catalyst or curing agent sets at temperatures which are below room temperature—lower than 68 F.

Hot-Melt Adhesive—Adhesive material that must first be liquefied by heat, generally in the range of 150 F to 400 F, before producing adhesion. These are composed of combinations of resins, waxes, or both.

Room Temperature-Setting Adhesive—These materials set in the temperature range of about 68 F to 86 F and, as with cold-setting adhesives,

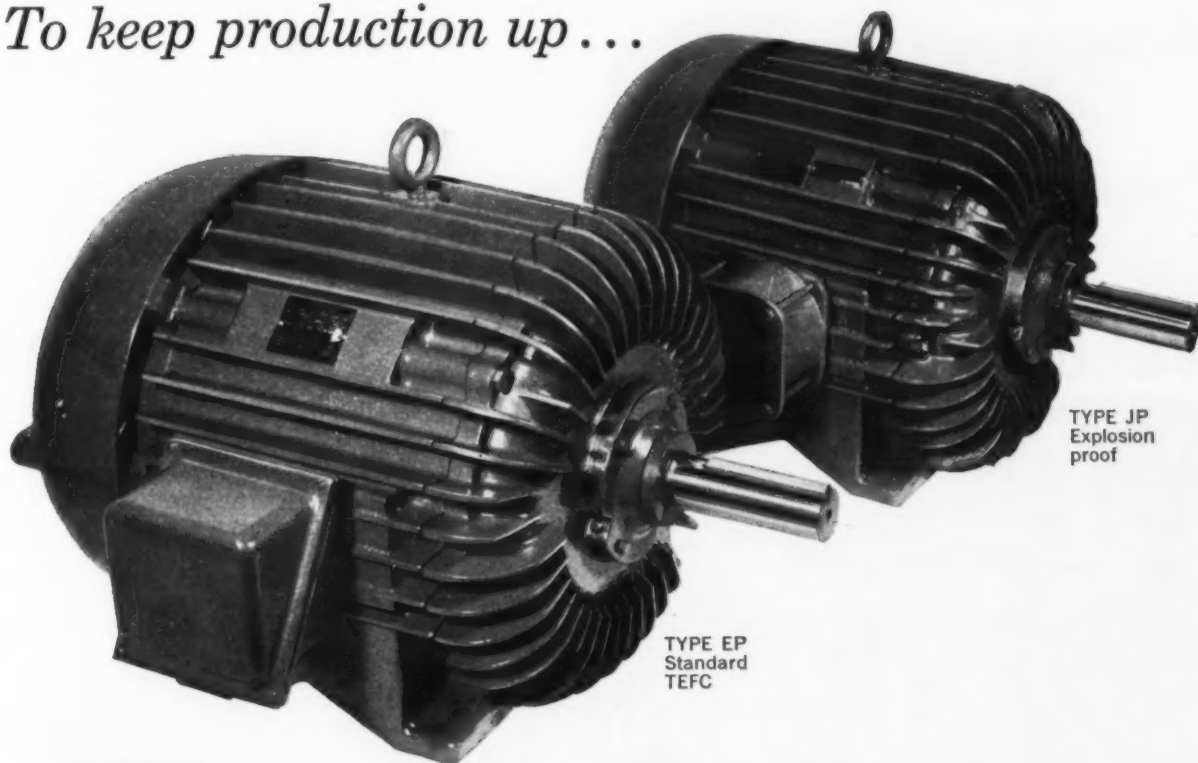
generally requires the addition of a curing agent or catalyst.

Thermoplastic Adhesive—These adhesives can be resoftened by heat after producing adhesion between two surfaces. Components of such materials are commonly made up of thermoplastic synthetic resins such as cellulose derivatives, acrylics, vinyls, and the like.

Thermosetting Adhesive—Such adhesives retain their hardness when once heated and will not soften again on the application of additional heat.

(PW, 11/27/61)

To keep production up...



**PICK
FROM
THIS
PROTECTED
PAIR...**

Here's a power-packed pair of Wagner® totally-enclosed fan-cooled motors—Type EP, standard, protected against damage from dust, abrasive, fumes, steel chips or filings; and Type JP, explosion-proof, for safe use in specified hazardous locations.

They'll keep your production rates up, delivering full rated horsepower under the toughest conditions... staying on the job with dependable, continuous service that means peak output. They're the perfect pick, for individual machines or for automated lines.

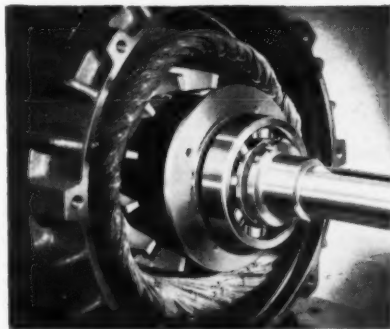
In the design illustrated, these motors are built in ratings through 100 hp in NEMA frame sizes 182-445U. Let your Wagner Sales Engineer show you how this protected pair (or larger Wagner enclosed motors through 500 hp) gets the job done. Call him, or write us for Bulletin MU-224.

Wagner Electric Corporation

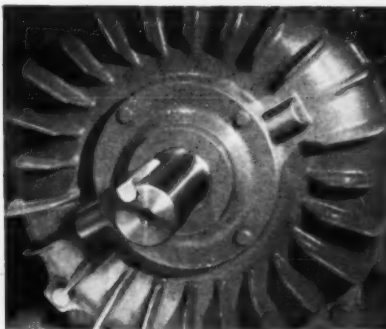
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Manufacturers of LOCKHEED® Products

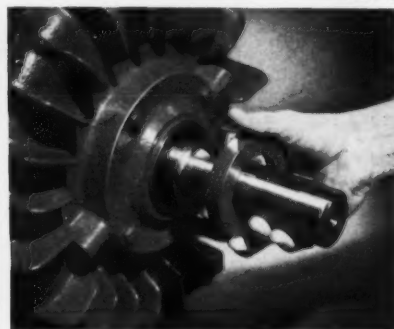
WM50-19



HEAVY-DUTY BALL BEARINGS... The ball bearings used in these motors are of the highest quality, with more than ample capacity to provide long, troublefree service under heavy loads.



BEARINGS CAN BE RELUBRICATED... Factory lubrication will last for many years under normal service, but openings are provided to permit relubrication that adds years to motor life under severe conditions.



SECURELY SEALED FOR LOW MAINTENANCE... Both ends of these motors have running shaft seals to keep the bearings clean. Bearing housings are effectively sealed to prevent escape of grease.

Product News in Brief

New Burroughs Series

Detroit—Burroughs Corp. has completely restyled its F6000 series of numeric accounting ma-



chines. The new series replaces some 15 Sensimatic models which carried designations F100 through F700.

Prices have been reduced as much as 10% on deluxe models in the new series. Top price is now \$6,740, compared to a previous \$6,985 maximum. Basic models are priced from \$2,580, while some tags on standard models have been increased about 5%. The new price structure narrows the cost range between standard and deluxe models.

The new F6000 machines have

revamped color combinations, newly designed key tops and cases which are 2¼ in. wider and 3½ in. deeper than the older models.

The machines are designed for such general business applications as inventory control, payroll, accounts receivable and payable, and billing, among others. Governmental agencies, public utilities, manufacturing firms as well as wholesale and retail concerns make up a large part of the broad market for the new line of accounting machines.

GE Fused Quartz

Cleveland—General Electric Co. has developed a new "ultra-pure" fused quartz, which the company says is the first to be made in the U.S. from domestic raw materials.

With the new process GE is now producing fused quartz which has a higher degree of purity than ever before possible, at a cost comparable to that of quartz made with imported material, according to the company.

Because of its high purity, the new quartz has higher thermal resistance, enabling it to withstand high temperatures for longer periods of time. Tests

show, for example, that the new material will deform at less than one-half the rate of the former quartz when subjected to temperatures of 1,200 C and higher.

In addition, tubing and rod produced from the domestic source will devitrify much more slowly, and remain more transparent, at these high temperatures.

Victaulic Couplings

Elizabeth, N. J.—A simple, low-cost method of connecting plain end pipe and fittings in sizes from one to six in. has been developed by Victaulic Co. of America. The new method is said to reduce the time and expense of pipe installation by eliminating the need for threading, beveling or flanging pipe ends.

Key to the system is a rugged gasket which is centered over the pipe ends and covered by iron coupling halves fitted with stainless steel grips. When these couplings are bolted together, the



steel grips engage the pipe ends and securely lock them together.

This mechanical "bite" is superior to the gasket compression grip of sleeve-type couplings, according to the manufacturer. In addition, the full wall thickness of the pipe can be utilized since no metal must be removed to make the joint—an extremely valuable feature for corrosive or abrasive services.

The Victaulic "Plainlock" couplings are easier to position, less than half as wide as sleeve-type couplings, and substantially smaller in outside diameter than flanges.

Polystyrene Molding

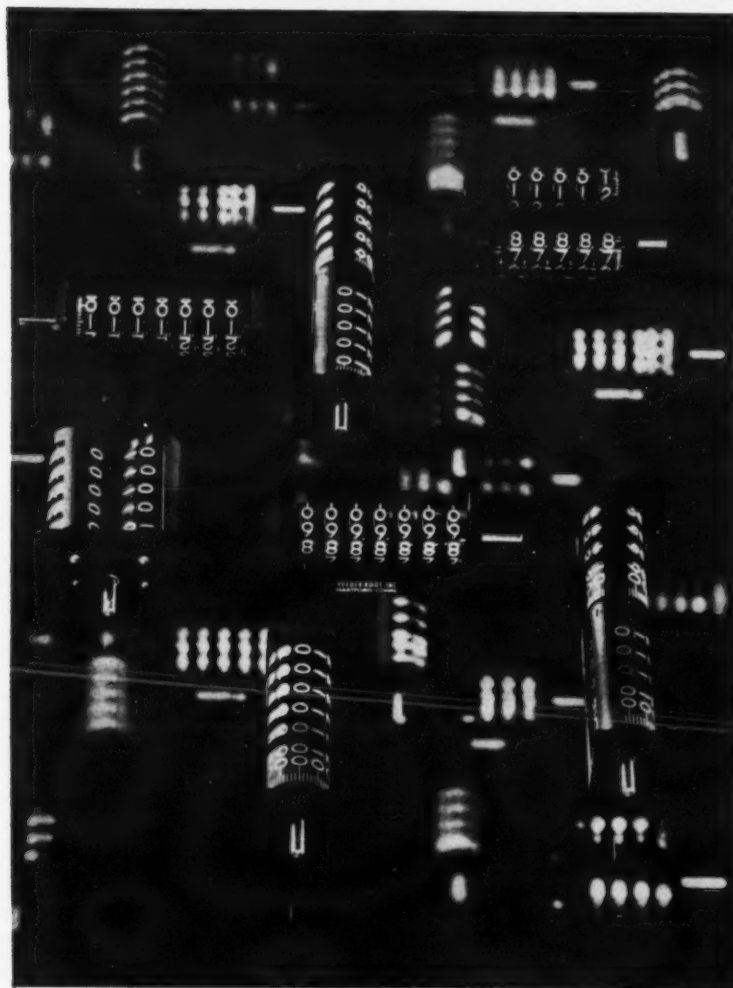
Caldwell, N. J.—A completely automated machine for molding polystyrene beads into a wide range of foam packaging components has been announced by Champlain-Zapata Plastics Machinery, Inc.

According to the firm's research and development director, Frank H. Lambert, the new unit can reduce molding cycles down to as low as 20 seconds on thin-walled objects.

The machine features: automated control of the entire molding cycle, newly designed pneumatic filling mechanism of reduced size and weight, increased versatility in accommodating all types of molds, automatic handling of finished molded products, and variable steam temperature outlets to increase molding flexibility.

Champlain-Zapata anticipates that uses for the new molding machine will be primarily in the packaging and related fields. Due to an adaptability to high-speed, in-line processes, it offers advantages and savings to product manufacturers who wish to develop an in-plant packaging operation integrated with production, the company reports. The new molder also will be of value to packaging companies.

Veeder-Root announces Veederline:



108 versatile counters

for military, commercial and industrial applications.

Veederline sets a new standard in direct-drive high-speed counters. Typical fields of use range from navigation, tracking, radar, ground approach, fire control and guidance systems to data processing, gauging, measuring, machine tool indication and process totalizing devices.

Veederline—a new range of single, tandem and dual counters.

Series 1742:

68 single counters for basic digital communication.

Series 1758:

28 tandem counters for additive counting from a fixed reference in either direction.

Series 1759:

12 dual counters for alternate space considerations. Low torque, low inertia, all rotations.

For new catalog write:

Veederline,
Veeder-Root Incorporated,
Hartford 2, Connecticut

count on...**VEEDER-ROOT**

General Dynamics Div. Installs First PBX Electronic Telephone Exchange

New York—General Dynamics Telecommunication has made the first installation of the electronic private branch telephone exchange (PBX) designed and produced by the company. It is aimed at improving efficiency in business communications and permits a host of new services.

The electronic Stromberg-Carlson system operates many times faster than electromechanical systems and reduces space requirements and maintenance costs for telephone companies. It lets outside parties dial straight through to an individual's extension and gives subscribers additional benefits including:

- A person leaving his office can dial one digit and the number at which he can be reached to automatically forward any calls that may come in while he's away.

- A PBX attendant who finds a line in use can press a key that tells the electronic circuits to "remember an incoming call." As soon as the busy line is free, the waiting call is put through automatically.

- A person who wants to interrupt a conversation with one

party to reach another can dial a digit without breaking the connection, make and complete the second call, and then be automatically reconnected with the original party.

The original installation has been put into operation by the United Telephone Company of the Carolinas, Inc. A community-wide, electronic dial telephone system also has been sold and will go into operation in a North-eastern state early next year.



ELECTRONIC SWITCHBOARD: Unit requires only one-fifth as much room as conventional system, yet permits a host of automatic features such as automatic forwarding of phone calls, direct inward dialing.

Epoxy Package Designed For Both Catalyst, Resin

Laguna Beach, Calif.—A two-component, 1/10-oz. epoxy package available from Plastic Associates permits direct mixing of the two parts.

Catalyst and resin are contained within the same vacuum-formed polyethylene container. Peeling back a poly-film cover exposes one component. A stirring stick is inserted and pushed down through the center of the container to collapse the separating element and mix both components directly inside the package.

ALLEN INTRODUCES

LOKON

NEW general-purpose LOCKNUT holds positively tight even after repeated on-off cycles . . . provides a "commercial" locknut in the "aircraft" quality range . . . offers strength without bulk for heavy-duty applications

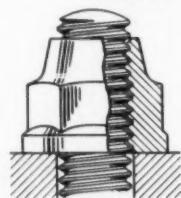
True to its name, the LOKON nut locks on a companion threaded member with a can't-shake-loose grip . . . holds indefinitely against heaviest impact and vibration. Because the basic design allows adequate deformation of the "turret top" without overstressing any portion of the periphery, "LOKONS" are highly resistant to fatigue failure. And, through closely controlled heat treatment, a degree of elasticity is achieved which permits re-use time after time without significant impairment of the locking action.

LOKON locknuts assemble fast and easy . . . start with finger spinning . . . tighten smoothly . . . lock at any point as soon as the threads in the elliptical section are fully engaged, and are readily removed without damage to the nut or mating part.

Investigate LOKON at the first opportunity. Discover the many ways this major development in locknuts can save you time and cut costs. Test samples* and engineering data are yours for the asking. And, for prompt, off-the-shelf delivery, call your nearby Allen Distributor who carries full stocks of LOKON locknuts as well as dependable Allen hex-socket screw products.

*Currently offered in sizes from No. 10 through 1/2", UNC and UNF threads. Other sizes available soon.

HOW LOKON LOCKS . . .



The threads in the tapered crown of the nut are slightly distorted from the round. When assembled to a companion threaded member, this out-of-round condition causes the nut to resist free entry of the mating part. As the metal flexes in an effort to conform to the circular pattern of the male threads, friction on the flanks of the nut threads is increased. The compressive forces exerted as a result of this diaphragmatic flexing action produce a positive, powerful locking grip.



Only "LOKONS" offer all these extras . . . all without EXTRA COST!

ONE-PIECE, ALL-METAL CONSTRUCTION—The LOKON design requires no segments, inserts or other auxiliary locking devices.

HIGH-GRADE ALLOY STEEL—Heat treated to Rc 26/30. Imparts tensile strength in excess of 250,000 psi and provides lasting spring tension for unlimited re-usability.

CLASS 3B THREADS—Comply fully with specification MIL-S-7742 and H-28 Handbook.

BUILT-IN FLANGE—Large-area bearing surface saves washer cost, speeds assembly, reduces indentation. Face of flange is held square with threads to insure even distribution of stresses throughout the flange and thread area.

DIMENSIONAL ACCURACY—Allen "pressur-forming" processes control grain flow, hold tolerances to consistently close limits, and produce fully-formed hex corners for sure-grip wrenching.

HIGH TEMPERATURE SERVICE—Performance is unaffected at temperatures to 550°F.

MILITARY SPECIFICATIONS—LOKON locknuts fulfill the performance requirements of MIL-N-25027.



ALLEN

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FOR OVER 50 YEARS, MAKERS OF FAMOUS ALLEN SOCKET SCREW PRODUCTS

Brush Beryllium Develops New Class of Compounds For High Temp Service

Cleveland—Brush Beryllium Co. has developed "a new class of structural materials" with top use temperatures of 3,000 F. This is about a 50% increase over materials now used in aerospace applications.

These Beryllide intermetallic compounds are made from beryllium that has been combined with a refractory metal and weigh about the same as aluminum. The company also is working with super alloys, refractory metals, and ceramics for high temperature applications.

The first two intermetallics available are beryllium-tantalum compounds which have been chemically combined so as to contain no free amounts of either constituent metal. Brush expects to have two compounds of zirconium-beryllium and three of niobium beryllium available shortly.

The materials can be fabricated into specific shapes by vacuum hot pressing, cold-pressing and sintering, investment and slip casting, isostatic pressing, and flame spraying. Small sizes only have been produced so far but, the company reports, scale-up studies underway show excellent promise.

During experimental stages with the tantalum beryllium compounds, the powder form beryllides sold to prime government contractors for about \$300/lb. The company estimates now, however, that due to recent advances and refinement in production techniques cost will be about half that.

Stanley-Humason Plastics

New Britain, Conn.—Stanley Works' subsidiary, Stanley-Humason, Inc., Forestville, Conn., is broadening its precision products line to include injection molded plastic parts.



PRICE COMPARISONS: J & J buyers study cost table for molded plastic containers. Experts at plastics forum answered many questions from conference participants on current and future uses of material.

J & J Purchasing Conference Stresses

Skytop, Pa.—Forty-seven purchasing men from eight affiliated companies assembled at a Pocono mountain lodge here a few weeks ago for a soul-searching look at themselves and the length and breadth of their operations and responsibilities.

First item on the two-day agenda was an 8 p.m. brainstorming session. For two hours buyers and their bosses debated ideas ranging from how to prepare their departments for a national emergency to methods of

copied with changing inventory levels, supplier pricing, and the relative merits of formal bids and negotiations.

The sense of urgency set at this kickoff session determined the pace for what officials of Johnson & Johnson termed their most successful company purchasing conference to date. Once a year for the past eight years the purchasing staffs of that world-wide supplier of medical and pharmaceutical products and its affiliated companies have headed for the

hills for midway sessions. The general theme has been: "Where are we headed; why are we going in that direction; and how do we get there?"

Deliberately steering shy of a straight diet of so-called nuts-and-bolts type of conference topic, J&J purchasing conferences ride a high plane. One outsider who was accorded the opportunity of sitting in as an observer commented: "At J&J, professional development is more than just a stepping stone to success; it's a way of life."

This year's Skytop conference was geared to "the individual"—to create what conference chairman W. R. (Ray) Rigney, purchasing director for J&J's affili-



ANTITRUST: Corporate attorney gives buyers chalktalk on technicalities of price legislation.

ated Ortho Pharmaceutical Corp., described as an individual sense of "enthusiasm and creativity."

Leadoff man was Johnson & Johnson's dynamic vice chairman of the board, Philip B. Hofmann, onetime master salesman who flew in by helicopter from his New Brunswick, N. J., office, hammered for 40 minutes on a theme of "how's your sense of urgency," then helicoptered back to Jersey. Assigning purchasing a key role in maintaining J&J's corporate profit level, Hofmann stressed the importance of personal perspective, intuitiveness, and ability to spot new ideas as prerequisites to managerial advancement.

The remainder of the conference program then ticked off the basic areas of individual responsibility for getting the job done. Almost primer-like in its attention to basics, it nevertheless concentrated on the importance of the individual buyer in the operation of a successful purchasing department. Discussions ranged from reviews of basic responsibilities of purchasing and supplier relationships to fundamentals of buying from foreign suppliers and "the art of selling ideas."

Counterbalancing such fundamental reminders as paying attention to details in purchasing contracts was a discussion of "how to improve personal efficiency and the importance of budgeting time." Tips on how to prepare departmental reports followed pointers on the basics of "problem-solving." Speakers in nearly every case were staff members or purchasing directors of the various J&J companies — Ortho, Ethicon, Johnson & Johnson, Chicopee Mfg., Permacel, Personal Products, McNeil Laboratories, and Tek-Hughes.

The conference's one technical session was devoted to plastics.

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It was eight o'clock in the East, of course, but our Seattle rep called the home office anyway. He talked to the Sales Service Manager, who tracked down the Traffic Manager at his Friday-night bowling game. They both went to work, and by 11:00 that night the order was assembled from Rome's stock. It was shipped by plane and by 7:30 Monday morning was in Seattle and on the job.

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ALUMINUM CONDUIT



Creativity, Individuality

Speakers representing the producing and fabricating industries reviewed the history and outlook for industrial uses of plastics, a major purchase item for many of the J&J buyers.

Purchasing within the J&J corporate family is completely decentralized. Each of the eight J&J companies supervises its own purchasing. Products are so diversified there is little or no opportunity for corporate purchasing of key products. Thus, the annual buyers' conference provides an opportunity to promulgate basic company policy and corporate planning.

One example of this came in the opening brainstorming session when the eight purchasing directors at the meeting concentrated for a time on what steps need be taken to gear their departments for operation during a national emergency. Here they dealt with such matters as emergency fuel and power supplies and an assessment of supplier capabilities under wartime material and manpower shortages.

J&J's assistant general counsel, John O. Green, brought the procurement staff up to date on latest antitrust decisions, with special attention to both purchasing and

company's products, efficiency, and costs."

And seconding this philosophy at J&J was the man who inaugurated it—George W. Achenbach, J&J vice-president-purchasing and ranking purchasing man within the Johnson & Johnson corporate family. In a plea for recognition of the "spiritual side of purchasing," Achenbach summed up by noting we "live in the greatest and speediest generation ever known; we all need help from one another."



IDEA MAN: Ortho Pharmaceutical's Ralph Williams says a good P.A. also must be a salesman, expert in art of selling ideas. Conference stressed. . . .



INDIVIDUAL CREATIVITY: Here a member of the audience signals speaker to clear up a point. Sessions encouraged sense of urgency in buying assignments.



EXCHANGING POINTERS: P.A.'s from three J & J companies review speaker's points at break.


supplier responsibilities in pricing.

And because Johnson & Johnson actively demonstrates its corporate interest in public affairs, William H. Baumer, co-author of the book "Politics Is Your Business," gave advice on that topic. Baumer, chairman of the National Institute for Disaster Mobilization, heads J&J's programs for businessmen in politics and community and governmental relations.


To conference chairman Rigney, "creativity is the very heart of purchasing"—and that was the point he sought to emphasize this year.

Two main sources of creativity, according to Rigney, are (1) materials and processes and (2) consumer need, with "purchasing playing a particularly important part in the creativity that comes from materials." It is in this area that Rigney and other J&J purchasing chiefs see the greatest challenge for the individual buyer. Says Rigney:

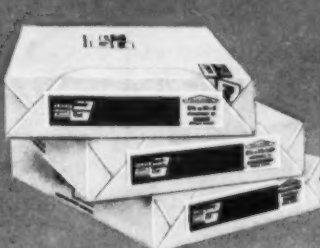
"This will be a new decade of vast technological progress and competition for markets. Greatly improved materials, equipment, and processes will be available to serve every purpose. It will be our job to see that these materials are known to the departments and individuals who can utilize them with good effect on our



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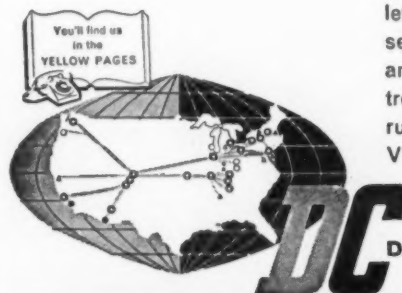
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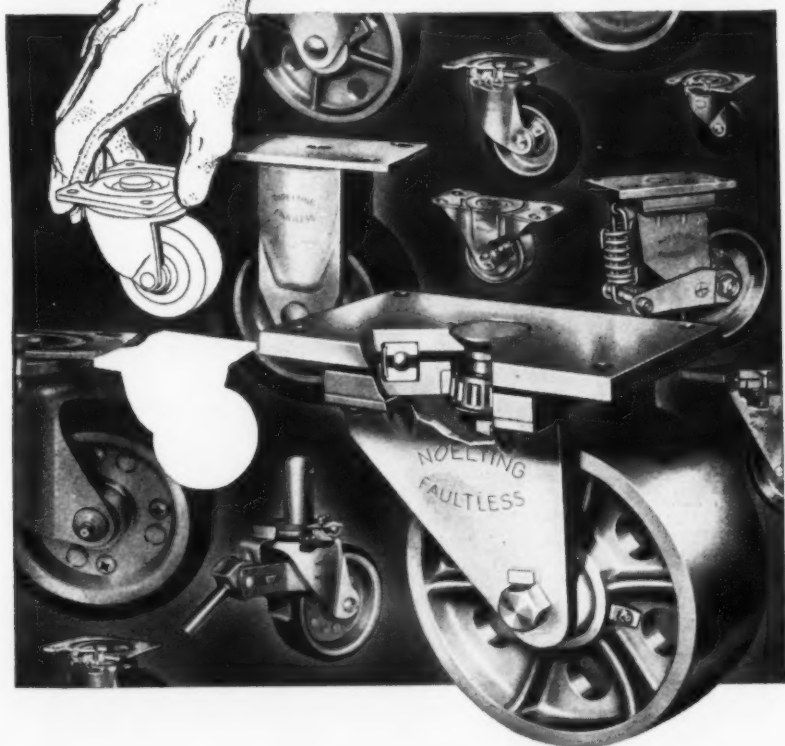


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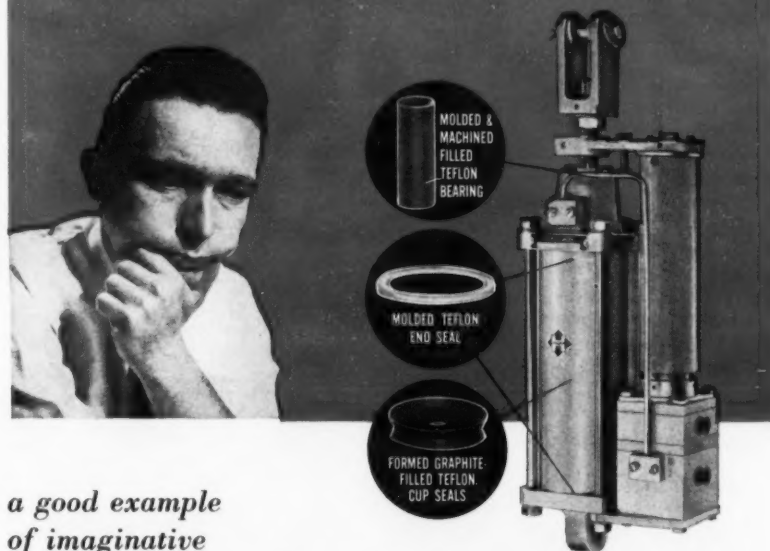


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new applications for

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a good example
of imaginative
thinking by Hagan Chemicals & Controls...

A small pneumatic power positioner that drives valves, dampers or other control devices with an accuracy rating of $\pm 1\%$ has been developed by Hagan Chemicals & Controls, Inc., of Pittsburgh. To insure longer service life, reduced replacement and maintenance costs and maximum reliability, Hagan specified TEFLON by SPARTA for the 3 parts shown.

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Standard TEFLON shapes, such as tubing, rod, sheet, tape, molded billets and "O" rings are always available.

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Crackdown Urged on Illegal Shipping Operations

Denver—The National Industrial Traffic League has come out in favor of legislation that would make it easier for the Interstate Commerce Commission to crack down on shippers and carriers engaged in illegal operations.

League members also decided at their 54th annual meeting here to take positive steps to prevent motor carrier rate bureaus from engaging in "unlawful monopolistic pricing." The NITL decisions were taken in the form of a series of votes on policy recommendations made by league committees.

On the key issue of illegal shipping activities, the league decided to support legislation proposed by Sen. George A. Smathers (D-Fla.) and Sen. Warren G. Magnuson (D-Wash.).

S. H. Flint, chairman of the Administrative Procedure and Legal Services Committee, said the Smathers proposal would enable the ICC to bring a shipper into the same case with a motor carrier regardless of where the shipper's headquarters was located. At present, ICC actions are limited to the area of the state within which a suit is filed.

Hampers Commission

For example, said Flint, if the ICC should file a case against a motor carrier in federal district court in Chicago, it could not bring into the case a shipper with headquarters in North Carolina. Flint said this hampers the commission, since it often has to file in the state of the carrier's headquarters, although the shipper is located in another state.

In endorsing the Magnuson bill, the League supported a request of the ICC. The proposal would give the ICC power to deny, revoke or suspend the operating authority of a carrier which engages in some undesirable or criminal activity.

Would Expand Scope

The commission now issues certificates or permits to carriers upon a showing that the proposed service will meet a public need and that the applicant is fit, willing and able to perform the proposed transportation. The test of fitness, however, applies to such factors as safety of opera-

tions rather than activities or habits of the applicant.

The league took the motor carrier rate bureaus to task on the grounds that the bureau staffs in many cases are making rate policies themselves rather than merely reflecting the wishes of individual truckers in preparing and publishing tariffs.

Noting that motor carriers have a "virtual monopoly" on small shipments traffic, the league's Common Carrier by Motor Ve-

hicle Committee said "remedial steps" should be taken to rectify this "potentially deadly" situation.

First step, as approved by the NITL, will be to inform motor carriers and the ICC of the "danger." If necessary, it was indicated, actual appeals may be made to the Interstate Commerce Commission and the Justice Dept. specifically to restrain the rate bureaus from "engaging in unlawful monopolistic pricing."

Stockpile Sales, Competition Slash Prices of Natural, Synthetic Rubber

(Continued from page 1)

Chemical Co. last week was forced to reduce quotes on its polyisoprene synthetic rubber by 2¢/lb. to keep it competitive with the natural product. Polyisoprene synthetic is said to be chemically identical with natural rubber. Its new price will be 23¢/lb., f.o.b., Torrance, Calif.

The latest drops, while part of the long-run battle between both types of rubber, were precipitated last month when the United States told producer countries it would start selling up to 5,000 long tons a month of stockpiled rubber at prices below 32¢/lb.

Despite protests by producer countries (Malaya said the move was tantamount to "economic subversion") the U.S. has shown no signs of rescinding the order. However, Under Secy. of State Chester Bowles said in Malaya that he would take up Malayan objections with the Administration, and would personally study the problem in an effort to effect a fair solution.

Britain followed up the American move by beginning to sell up to 1,000 long tons at under 32¢/lb., despite complaints from Malaya, Ceylon, and Indonesia.

Britain plans to continue this policy for about a year, but if there are signs the market is being disrupted by these disposals, the plan will be reconsidered.

There are growing signs that such a market disruption may very well be in the cards, for production of tree rubber already is outrunning consumption by a considerable margin. Natural rubber consumption is now around 2,040,000 tons/year, while production is estimated at about 2,200,500 tons.

Production is expected to rise even higher during the next decade (estimates range about 5%) as a result of replanting, especially in Malaya, whose output is expected to double to 1.5-million long tons by 1975.

But glut or no glut one fact is becoming increasingly clear: The improvement in synthetic varieties over the past few years means that tree rubber will now have to compete with synthetic grades on a straight cost basis.

As one trader put it, "The days of 30% to 40% profits for producers are numbered, but since productivity is increasing, the competition will in no way spell ruin for the rubber plantations."

Air Force Procurement Chief Puts West Coast Contractors on Carpet

(Continued from page 1)

portant problem areas. Among them:

- Contractor purchasing systems, while generally satisfactory, are not being followed. All too often, emergency engineering or production control problems result in hasty purchases—frequently sole source and without adequate price analysis—which generate excessive costs.

- Middle management levels are weak. While top management direction and planning is generally good, the word doesn't seem to get through middle management to lower levels.

- Logistics and planning are often inadequate because of ineffective direction and control. In particular, management controls over status of spare parts, technical manuals, and field maintenance are neither accurate nor sufficient.

Bradley said that this year he will again ask contractors to file reports on specific cost cutting achievements.

He also outlined some of the

specific procurement areas in which the Air Force will concentrate its cost cutting efforts in 1962.

"In follow-on contracts for spares, the pressure will be increased to avoid sole source procurement, especially for noncritical items," said Bradley. "In this connection, we expect industry to help us make a list of those items that are of the non-critical variety so that we can get more competition and firm prices before making purchases."

The Air Force also will try and halt a recently detected trend to separate reliability from design, development and production, and treat it as an "add-on" package to be purchased—if and when needed—at extra cost.

To stop this, the Air Force will require that bid proposals contain quantitative reliability levels which the bidder expects to achieve at the system, subsystem, and component levels. These will be evaluated during the source selection process.

"Specific, minimum acceptable, reliability requirements will be included in Air Force contracts for systems and associated material. When these require-

Purchasing Week's

Purchasing Perspective

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will prevail (except for a possible significant bulge in steel inventories during the first half of 1962). Businessmen are expected to come back strong in plant and equipment purchases, however, and governmental (federal, state, and local) purchases are expected to continue their rise to a new combined total high point—about \$118-to-\$120 billion.

The steel industry will be one of the biggest, if not the biggest, contributors to a possible new high in industrial capital equipment expenditures in 1962. Behind this scheduled outlay is the industry's determination to show its critics it can overcome its labor problems and slug it out with its materials competition.

Some steel industry sources estimate producers are striving to modernize and automate to the point where labor costs eventually will have only about one-third the effect they now have on end product price. But any ideas about completely wiping out wage-unit effects on prices are considered pipe dreams.

However, steel's price woes must be blamed on more than labor troubles. Industry sources also admit (1) poor salesmanship (2) poor production planning, (3) obsolete plants, and (4) just plain growing pains. "While our salesman took orders, aluminum was selling," gripes one steel mill official. Says another: "Too many plants were poorly laid out and weren't flexible enough to switch to specialized needs of customers."

Chances are the new splurge in plant and equipment improvements will correct these faults. In addition to reducing labor costs, current renovations—running into hundreds of millions of dollars over the next few years—are being planned to build more flexibility and versatility into production facilities to better serve customer requirements.

In assessing supplier labor outlooks for next year don't ignore the possibility of disruptions caused by feuding AFL-CIO craft and industrial unions. Watch developments in Miami Beach over the next couple of weeks when labor federation President George Meany tries to tone down the rivalry between these battling unionists.

The squabbling flared in public a few days ago when Walter Reuther, president of the federation's Industrial Union Dept., verbally assaulted building trades unions, accusing them of trying to steal work from factory production workers. Craft union leaders angrily retorted that the autoworkers' chief and his associates were only "frustrated extremists."

The two union groups will take their head-on clash to Florida next week where the AFL-CIO opens a 10-day convention. As of now, however, betting is strong that Meany will be able to soothe the hard feelings—at least for a while.

Still on the record, are Reuther's warnings to craft unions to stay out of industrial plants. He told crafts to end their campaign to secure work through contractors to handle plant maintenance work. The dispute is being brought to a head because the system, under which industrial employers farm out maintenance work to contractors and craft union crews, has proved increasingly popular since it was started in 1956.

With auto, steel, rubber, and other industrial unions facing a steady increase in unemployment due to automation, Reuther and other factory union leaders are fighting hard to keep jobs.

ICC Suspends Constant Charge Plan Of Mid-Atlantic Trucking Conference

Washington — A barrage of shipper protests led the Interstate Commerce Commission to suspend the controversial constant charge proposal of the Middle Atlantic Conference which was to have gone into effect last Monday.

A similar proposal by the Eastern Central Motor Carriers Assn. was suspended earlier. Both will be held in abeyance for seven months, pending a commission decision.

Under the constant charge

plan, flat rates would be levied by motor carriers at various weight breaks for shipments of 300 lb. or less. The charges would apply regardless of the commodity involved, and so would be based only on weight and distance, not classification.

Shipper groups strongly oppose elimination of classification ratings on small shipments. They also claim savings on paperwork which would be realized by the carriers with the simplified rate plan would not be shared with shippers.

Among those protesting the Middle Atlantic proposal were the National Industrial Traffic League, the American Cotton Mfrs. Institute and other textile groups, Associated Industries of New York State, the Shippers Conference of Greater New York, and the National Office Furniture Assn.

Ford Set to Put Meteor On Sale November 30

Detroit — Ford Motor Co.'s new medium-size compact, the Meteor, goes on sale Nov. 30 with a rock-bottom price of \$2,080 for a six-cylinder, two-door sedan.

The new 116-in. wheel base model, produced by the Lincoln-Mercury Div., is larger than most other compacts, but smaller than standard-size cars. The Meteor comes in two- and four-door models, with either a six-cylinder, 101-hp engine or an eight-cylinder, 143-hp engine.

Meteor prices range from the low of \$2,080 up to a suggested factory list of \$2,313 for a four-door eight-cylinder, custom sedan. The suggested prices include factory-installed heater and defroster, but not transportation charges, preparation and conditioning, or federal, state and local taxes.

Steel, Prices Rated Top P.A. Worries for '62

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was coupled with the general task of keeping inventories down—a situation cited by many P.A.'s as their key specific headache. "Inventory control is our big problem," said David A. Bancel, Cerro Sales Corp. vice president. "The operators are trying to keep an adequate supply. Management is trying to hold down costs. There's a great deal of pressure on us."

Despite economic forecasts that prices will move in a narrow range—up an estimated 1% over-all next year—the threat of higher prices poses headaches for numerous buyers. "We're not happy over the prospect of a continuing edging up of prices on containers and other materials—2% here, 3% there," said a buyer for a Southern paint and varnish firm. "We're being forced into the foreign market on certain items because of better prices there."

Price Problem in Reverse

But Robert Sundberg, purchasing agent at Hewlett-Packard, Palo Alto, Calif., electronics manufacturer, figures he has a price problem in reverse: how best to handle procurement in a period of declining prices on key purchases. That's what's been happening on semiconductors, and Sundberg says one of his big troubles is "keeping my books current on prices. We don't want to place commitments based on time with any semiconductor vendor. We'll keep on buying for actual needs only."

Some manufacturers—on both East and West Coasts—aren't taking any chances on international events. Hewlett-Packard, for example, has given Sundberg an okay to lay in a six-to-nine-month supply of critical materials from European suppliers as "insurance."

Declining prices also are a stickler for the purchasing department of an aluminum company which reduced prices recently on its own products. "Our big problem, from an administrative point of view, is how to do an effective purchasing job in the face of changing price pictures, set up new techniques, and make our operation more efficient," PURCHASING WEEK was told.

Technical Needs

Findings buyers with management and technical backgrounds adequate for the job poses another big problem, particularly on the West Coast where purchasing directors cry they are hard pressed to find men who can "talk the language" of electronics. M. W. McClung of Boeing's Aero Space Div., expects the problem to be even more critical in 1962.

Kenneth B. Gay, of North American Aviation, points out that in the "space business buyers are required to work at a technical level far beyond that of the airframe era, or even the early missile days." Because buyers must work at a level with Ph.D.'s, Gay says, "We find ourselves needing people with much better qualifications than were required five years ago. The problem is where to find them." In many cases, says Gay, the only answer is to get green men and train them "up to the level required."

The personnel problem hits another way too. In Pittsburgh, some purchasing directors said they are faced with shortages of good staff members and simultaneously increasing work loads, with no immediate solution to how to reduce either. The answer for this, in the opinion of one Pittsburgh purchasing chief, is to "work smarter" than ever.

Labor also crops up as a thing to watch on the calendar of many procurement men. Aside from the possible production and perhaps price disruptions latent in the steel situation, most purchasing men were mostly concerned with individual supplier disruptions that could upset tight inventory schedules.

And all around the country, purchasing recommendations to management for 1962 were concentrating on increasing use of value analysis programs. Many hurry-up calls are going out for more data processing equipment to take over routine ordering and reduce the flood of paperwork that keeps buyers from concentrating on the really tough problems turning up in day-to-day purchasing.

P. A.'s also say they are concentrating on setting up more centralized policy-making chains of command, particularly in diversified companies. Others are pressing for more blanket and open contracts to obtain volume discounts.

Defense Dept. Purchasing Braintrust Sets Up Shop With \$600,000 Grant

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of about 12 top level purchasing and logistics experts. The \$600,000 contract will cover the first year of its operations.

The institute's official function, as described by McNamara, will be to make "studies directed at improving the business management, particularly the logistics management, of the Defense Dept." The bulk of the studies will be made by the institute's staff, but some research will be subcontracted out to specialists in private consulting firms and universities.

Specifically, the institute has been assigned four major projects:

- To streamline the Pentagon's elaborate system of "requirements planning." The idea is to "better adjust our requirements to our needs," as McNamara puts it. For instance, the Defense Dept. now has inventories of about \$13-billion worth of surplus equipment, about half of which is surplus aircraft spare parts.

- To propose ways of simplifying design specifications and standards to which military contractors must now conform. Pentagon experts figure that about half of the 23,000 military specifications and standards now applied to contractors are either out of date or obsolete.

- To recommend methods for expanding competition on military procurement. About 60% of defense contracts, for instance, are now awarded to single-source producers.

- To study ways of increasing incentives for improved con-

tractor performance. The Pentagon seeks a formalized system for evaluating the status of production schedules, costs and technical performance.

Each of these issues—uneconomic buying, excessive controls on contractors, limited competition, and contractor performance—have figured in recent Congressional and General Accounting Office investigations of faulty military procurement.

Organization of the institute was announced by the Defense Dept. two months ago. Its operations will be guided by a seven-man board of trustees headed by Charles Kellstadt, Sears, Roebuck & Co.'s board chairman. The other trustees are industry and academic people.

Allied Chemical to Merge With Natural Gas Firm

New York—Allied Chemical Corp. plans to merge with Union Texas Natural Gas Corp., a producer of natural gas and petroleum products. The merger must be approved by stockholders of both firms.

The two firms recently signed an agreement to build a giant petrochemical complex in Louisiana. The discussions on that project led to the merger talks, company officials said.

Allied, which deals primarily in coal tar chemicals, was reported to have been seeking a merger for some time with a petroleum supplier in order to expand its operations in petrochemicals.

Late News in Brief

New Minimum Prices on European Steel

Brussels, Belgium—The Brussels Export Convention has set new minimum prices to bolster sagging European steel prices. New minimums include: round steel \$83/ton; bar steel \$95/ton; structural steel \$94-98/ton; wire rod \$89/ton; heavy plate \$91/ton; hot-rolled strip \$93/ton. No minimums were set for thin gage sheet.

Ford Imports Earth-Moving Machines

Detroit—Ford Motor Co. is importing 25 earth-moving machines from British firms to determine if there is an American market for the products. Ford said the action was "experimental," but British sources said Ford has signed an \$11.2-million contract with an English firm to import 2,000 rear dump haulers.

Olin Mathieson, Chemetron Change Pleas

New York—Olin Mathieson Chemical Corp. and Chemetron Corp. have changed their pleas from not guilty to no contest in a case involving conspiracy to fix carbon dioxide prices. Air Reduction Co. and General Dynamics Corp. previously pleaded guilty to the federal charges. Sentencing is set for Dec. 15.

Tariff Commission to Probe Cotton Imports

Washington—President Kennedy has directed the Tariff Commission to investigate cotton imports and advise him whether the duty should be raised. The action was in response to demands by manufacturers for an 8½¢/lb. tariff hike.

Prices Cut on Dry White Lead Pigments

New York—Prices of dry white lead pigments, used in paints, are being reduced by 1¢ to 1½¢/lb. Silicochromate will sell for 19¢/lb. in carload lots; white lead basic carbonate at 16¢/lb. in carload lots. The changes, reflecting recent lead declines, are the first in more than two years.

Training Device for Process Operators

Buffalo, N. Y.—Carmody Corp. has developed a training device, similar to the Link light trainers used in World War II, for process operators in the petrochemical, chemical, oil, and allied industries. It simulates realistic changes in process conditions, including emergencies.

Market Debut Delayed for New Line Of Electrostatic Copying Machines

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machine on the market. Xerox Corp.'s 914 Copier, has been available for close to two years, but only on a rental basis. The desk-size machine rents at \$95 a month for up to 2,000 copies. Any over this cost an additional 3½¢ each.

Interest among potential users of these machines has been keen in view of their promise to serve as all-purpose copying tools. They use a dry process and copy all colors and types of writing, printing, or drawing.

Smith-Corona Marchant, which recently formed the Microstatic Div. to make its "Model 33" machine, says that commercial deliveries will be made in early 1962 at \$895 a machine.

"Testing is proceeding according to expectations and we are more likely to reach the market sooner rather than later than we are saying," a spokesman said. Initial production models went into field testing in July.

Bohn Business Machines, which has signed a production contract with Federal Mfg. & Engineering Corp., has targeted May 1 for delivery. Prototypes are now in production and BBM intends to get 100 to 200 into New York offices for field testing by February. Initial estimated prices of \$500 to \$600, however, have been hiked to "about \$800" a copier.

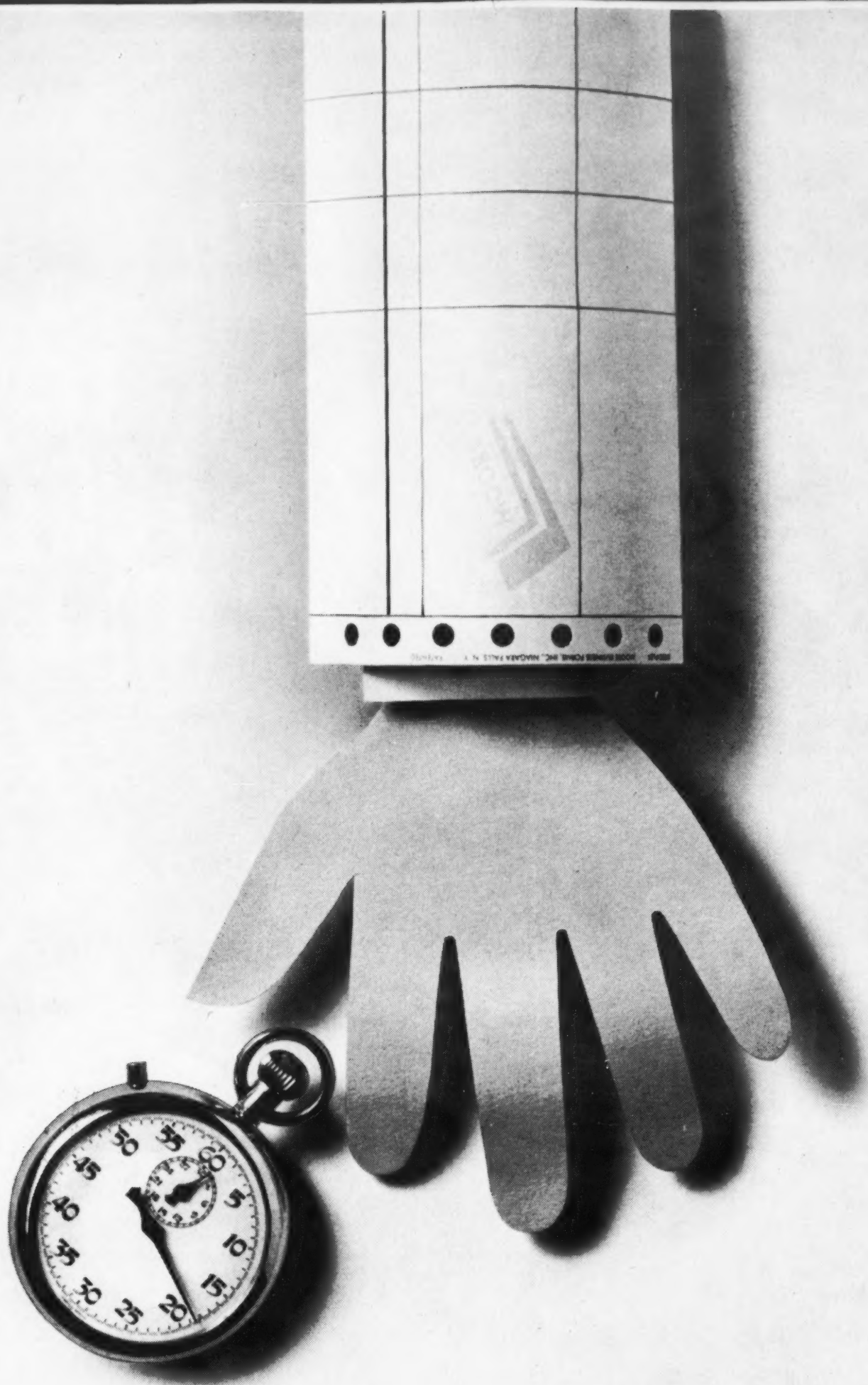
Savin, which expects to have its machine available in the early part of 1962, also is pricing it at about \$800, up from an original expectation of \$650 for semi-automatic units and \$750 for automatic. Design changes incorporated into the machine since its original showing at the Office Equipment Manufacturers Institute show last May have, however, added additional performance features.

A dialing system permits automatic duplication of one to 50 copies of an original and the unit also cuts the copy to the exact length of the original, up to 17 in.

APECO says, that it expects its \$1,195 unit to be competitive and has no plans for cutting prices at this time. Costs for copies turned out by the various machines all range at about 3½¢ to 4¢ each.

Price Changes for Purchasing Agents

Item & Company	Amount of Change	New Price	Reason
INCREASES			
Ammonium sulfate, granular, J. T. Baker, Dec. 1, crlts., lb.	.01	.095	
Sanded fir plywood, most specs., Georgia-Pacific.....	4%-5%	cost pressure
REDUCTIONS			
Citric acid, granular, carlots, lb.	.005-.025	.27-.28	competition
Sodium citrate, USP, gran., crlts., 100-lb. bags, lb.	.025	.265	competition
Ammonium citrate, dibasic, 250-lb. dms., lb.	.01	.76	competition
White lead, crlts., basic Carbonate, lb.	.015	.165	metal cut
Basic silicate, lb.	.01	.155	metal cut
Silicochromate, lb.	.01	.19	metal cut
Menthol, Brazilian, lb.	.25	\$6.50	quiet demand
Azelate low-temp. plasticizers (plastolein), 3 types, Emery Inds., tnkers., lb.	.01 & .02	.35-.45	broaden markets
Polyisoprene synthetic rubber, shell, crld., lb.	.02	.23	competition



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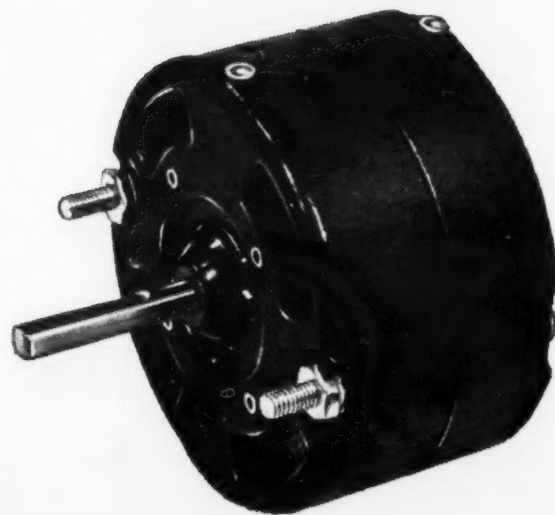


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